North Lily Heap Leach Facility
Closure Report

Permit No. UGW230001
North Lily Mining Heap Leach Facility
Juab County, Utah
March 2002

Prepared for:

State of Utah
Utah Division of Water Quality
P.O. Box 14487
288 North 1460 West
Salt Lake City, Utah 84114-4870

Prepared by:

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Sandy, Utah 84093
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1.0 Introduction and Summary

The North Lily Heap Leach Facility opened for operation in 1986 and continued through 1996. Prior to site closure, there were two fuel tanks, one diesel and one gasoline (both emptied and sold off as surplus), one caustic tank (residue removed, rinsed and steam cleaned, crushed and placed into on-site landfill), a lab/office trailer (crushed and placed into landfill following removal of all lab chemicals and equipment), a mill building (demolished and placed into landfill following salvaging, recycling, or proper disposal of all contents), a propane tank (removed from site), one material shed (demolished), pregnant pond (filled in and graded), barren pond (class IIIb landfill), overflow pond (filled in and graded), buried drain lines (removed), and electrical facilities (removed) (Figure 1). Following completion of closure activities, the entire site was fenced off for the safety of the public. All of these components were required to be removed, demolished and/or reclaimed, or installed in order to fulfill the Site Closure Plan. Photographs that depict the site and the reclamation process can be found in Appendix A.

2.0 Heap Leach Closure and Reclamation

The first step for closure was to restore the pad-margin leachate collection system. To do this, the under drain feeder solution collection system was restored and the perimeter drain system was replaced. The process involved the re-opening of the trench on the west side of the heap down to the heap liner, placing pea gravel into the trench, laying down a layer of pervious geofabric, installing a new perforated 4" PVC drain pipe, placing a second layer of geofabric on the pipe, adding more gravel onto the fabric, placing a third and final layer of geofabric on top of the gravel, and then covering the trench with spent leach material. After the peripheral drain was restored, the pad-margin was regraded to allow surface water runoff to drain from the pad surface to the adjacent terrain and reduce infiltration of precipitation and, thereby, the volume of water flowing from the pad to the pregnant solution pond.

Prior to the pad regrading, the leach pad material was sampled and analyzed for leachable trace metals, major anions, and cyanide using the Nevada Meteoric Water Mobility Procedure (Appendix B). This indicated no solutes present in concentrations that would adversely affect vegetation, soil, or water quality due to runoff leaving the margins of the lined leach pad.

Leachate which continued to flow to the pregnant solution pond through the reconstructed peripheral drain line was pumped into an enhanced evaporation system to reduce the volume of the collected leachate. This continued until the infiltration gallery/drain field was completed. When the drain field was completed, the perimeter drain line was connected to a concrete distribution box adjacent to the pad margin (No. 1 distribution box) (Figure 1), from which point the leachate would enter the post closure fluid management system (PCFMS).

The PCFMS begins with a gravity-fed, buried 4-inch line that extends from the No. 1 distribution box to a second distribution box (No. 2 distribution box) located adjacent to the drain/field. From the No. 2 distribution box leachate is carried in a second gravity-fed line to the drain field (Appendix A #1-3). These distribution boxes, each with the capacity of 1250 gallons each and the ability to be cleaned out, are designed to eliminate fines from entering the drain field by allowing the suspended sediment in pad leachate time to settle. Since shortly after construction of the pad margin was completed the drain down water has been non-turbid, which suggests that the perimeter drain line has been successful in its construction and that the sediment in the distribution boxes is minimal.

The heap leach pad itself was regraded using a D-8 Cat Dozer and a DS-155 Komatsu Dozer so that slopes were no more than 3h:1v and then reshaped. This was done to accomplish two objectives. The first was to establish a surface water drainage pattern and eliminate pooling of precipitation-derived water on the heap itself. The second objective was to have the heap blend into the surrounding topography. Once the regrading was completed, the area was ripped using D-6 and D-8 Cats to enable the approved seed mix a better chance to germinate and to prevent erosion. Then, a JBR employee, using an ATV-mounted broadcast seeder (Appendix A #4), applied a Granite Company Seed Mix to the heap (Table 1). To help aid in plant growth, composted cow manure from Silver City Compost was applied at a rate of 10 tons/acre. Because of the presence of whitetop clover and spotted knapweed, which are noxious weeds, a pesticide was sprayed wherever the weeds were located on the North Lily property. This was done in an effort to reduce the seed source from these weeds. (Appendix A #5).

3.0 Hazardous Materials Collection and Disposal

Prior to commencement of demolition of site components and pond closure, the facility was surveyed by a JBR hazardous materials specialist for potentially hazardous materials. All materials were documented, identified, inventoried, collected and properly packaged by trained personnel, profiled and manifested, removed from the site by licensed transporters, and taken to disposal facilities. All categorized waste was transported to Safety Kleens' Aragonite Facility Aptus, Utah, and Grassy Mountain Facility Clive, Utah, and Superior Special Services, Inc. Phoenix, Az. Caustic soda solution was transported to Kennecotts' Barneys Canyon gold mine for use in their heap leach solutions. Hazardous Materials Handling and Disposal Documentation is provided in Appendix C.

4.0 Drain Field

The drain field was designed in accordance with rule R317-5, Large Underground Wastewater Disposal Systems. The first step was to come up with a conceptual drain field design by estimating leachate discharge rates, identifying the preferred drain field location

(at a site that was both on North Lily property and would allow gravity flow from the pad), and conducting preliminary percolation tests.

When the conceptual design was approved by DWQ, final design began. A JBR geologist conducted thirteen percolation tests at various locations on the property during multiple site visits from September 2000 to February 2001. These tests were performed to ascertain the best location and size of the proposed drain field. All of the percolation test pits (designated T.P.), shown on Figure 1, were constructed in compliance with the Administrative Rules for a Large Underground Wastewater Disposal System R-317-5-4, Percolation Tests. Using the percolation data, an area defined by six test pits was selected as the footprint of the drain field (Figure 1). The lowest percolation rate, within this footprint, of 1.852 x10-3 cm/sec (T.P. Z) was used to calculate the appropriate application area for the drain field (Table 2).

The drain field was designed to have the capability of dispersing up to 6.41 gallons per minute (gpm), as approved by Department of Environmental Quality, Division of Water Quality (Appendix D). A Utah Underground Injection Control Program Inventory Information packet was completed and submitted to the Mr. Jerry Jackson at the Division of Water Quality on May 8, 2001 (Appendix E). When the leach field design was approved (Figures 1,2,3, & 4), construction commenced and was carried out in accordance with the Administrative Rules for a Large Underground Wastewater Disposal System R-317-5. On March 16, 2001, Blue Rock Excavating, Inc. grubbed the selected drain field area of vegetation and leveled the site to a uniform elevation with a D-8 Cat (85 feet per the site datum). During May 25-29, 2001, Western Excavating installed the drain field using a cat 322 track hoe, 2800 track hoe, and 950 loader. Excavation of the main feeder trenches was carried out first and the solid schedule 40 PVC lines were laid down with PVC crosses and tees connected along the solid line where the perforated schedule 40 PVC laterals would be connected. Then the lateral line trenches were excavated, 4 -6 inches of 3/8 inch (nominal) gravel was placed in each trench, and the perforated pipe was installed on the gravel layer. Another layer of 4 - 6 inches of gravel was placed on top of the perforated pipe and then a pervious geofabric was placed on top of the gravel. This geofabric prevents fines, derived from the overlying soil, from filling in the voids of the gravel, which could diminish the capacity of the overall system. Then, a layer of hand-placed native soil was placed over the geofabric to a depth of at least 6 inches. The last step in the trench construction process was to machine-fill the trench with native material and crown the top to allow for settling (Appendix A #4-9).

The No. 2 distribution box (made of reinforced concrete and with a 1250-gallon capacity) and gravity-fed drain lines were installed next. The No. 1 distribution box is accessible by an access manhole door on top of the box. The No. 2 distribution box was buried, with DWQ approval because of the depth of the system, the necessity to contour the surface to deter waters from pooling above the drain field, and the cost of additional risers to allow access. For ease of location of the distribution box, the box has been marked on the

surface with a tee post. On May 5, 2001, an as-built survey was conducted and is included in this report as Figure 5.

5.0 Class IIIb On-Site Landfill

In order to meet DOGM's requirements for site reclamation, non-hazardous materials, consisting primarily of demolition debris, needed to be disposed. The most economical solution was to create an on-site landfill. On May 7, 2001, North Lily was granted approval for use of the former barren solution pond through a Permit by Rule as a Class IIIb Landfill by the Division of Solid and Hazardous Waste (Appendix F). The barren pond was chosen as the landfill site because it was no longer in use for water retention, it had the adequate volumemetric capacity to contain the estimated quantity of debris to be generated, and was adjacent to the mill building from which most demolition debris would be generated. Building materials from the mill and lab/office trailer consisting of steel, wood, crushed concrete foundation, fiberglass insulation, electrical wire, plumbing, and aluminum siding, was all placed in the landfill (Appendix A #11-13). The caustic tank, which had been cleaned, was then crushed and placed in the landfill along with miscellaneous items, pipes, hoses, and fittings found around the site. Once all of this material was deposited into the landfill, an earthen cover was placed on top and the surface was graded so that water would not pool over the landfill (Appendix A #14-16).

The entire area has been fenced off using 5.5 - 6.0 foot t-posts and Oklahoma 2 point barbed wire.

To comply with the R315 regulations, the Class IIIb Landfill was registered with the Juab County Recorders Office, as No. 00224218.

6.0 Leachate Water Quality and Quantity

Water quality has improved since solution application to the pad ceased. North Lily's Ground Water Discharge Permit has been modified to allow subsurface disposal via the drain field. A copy of water quality analyses over the last two years is included in Appendix G. The water flow from the heap was measured daily before the construction of the drain field and measured weekly at the No. 1 distribution box once the drain field was constructed. The flow has been below a rate of three gallons/minute since early January 2001 (Appendix H).

7.0 Monitoring

Monitoring of the Heap Leach effluent discharge for both instantaneous and cumulative flow will be conducted on a weekly basis and will be reported to the Division of Oil Gas and

Mining and the Division of Water Quality on a quarterly basis. Samples of the discharge will be taken from the draindown fluid sampling port at the number 1 distribution box quarterly. The results will be submitted in quarterly monitoring reports on April 15, July 15, October 15, and January 15 of each year until the site has been determined to be closed by DWQ. The fourth Quarter 2001 monitoring report has been submitted to DOGM and DWQ (JBR, 2002).

8.0 References

JBR, 2002. North Lily mining Company Ltd., North Lily Heap Leach Discharge Report. Prepared by JBR Environmental Consultants, Inc.

Table 1

Granite Seed Company Seed Mix

North Lily Mining Company Ltd

TABLE 1

Granite Company Seed Mixture to Heap Leach		
Plant Description		**Amount (lbs)**
Agropyron Cristatum	Crested Wheatgrass	20
Agropyron Dasystachyum	Thickspike Wheatgrass	40
Agropyron Intermedium	Intermediate Wheatgrass	20
Agropyron Spicatum	Bluebunch Wheatgrass	40
Artemisia Tri Vaseyana	Mountain Big Sagebrush	2
Chrysothamnus Nauseosus	Rubber Rabbitbrush	10
Dactylis Glomerata	Orchardgrass	10
Elymus Cinereus	Great Basin Wildrye	40
Kochia Prostrata	Forage Kochia	10
Melilotus Officionalis	Yellow Sweet Clover	10
Medicago Sativa	Alfalfa	20
Penstemon Palmeri	Palmer Penstemon	10
Purshia Tridentata	Antelope Bitterbrush	20
Rosa Woodsii	Woods Rose	15
Sanguisorba Minor	Small Burnet	30

Table 2

Percolation Rates at North Lily

North Lily Mining Company Ltd

TABLE 2

Percolation Rates @ No.Lily

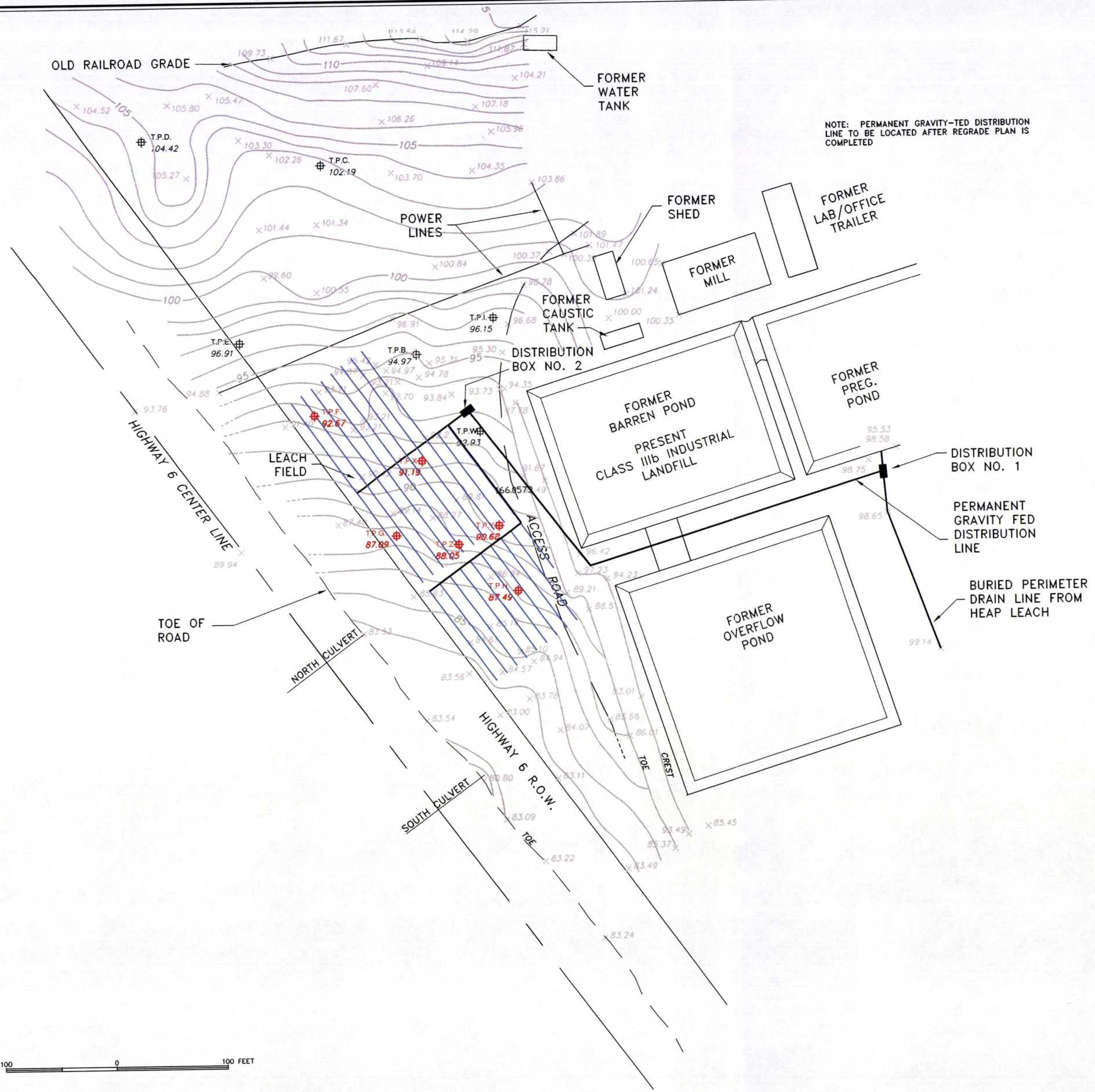
	Inches/30 Minutes	Inches/Hour	Minutes/Inch	erc Rate cm/sec	gal/ft2/day	Elevation
Pit A	1.313	2.625	22.86	0.001852	1.04583	N/A *
Pit B	0.625	1.250	48.00	0.000882	0.72169	91 *
Pit C	3.250	6.500	9.23	0.004586	1.64570	98 *
Pit D	3.188	6.375	9.41	0.004498	1.62980	98 *
Pit E	0.125	0.250	240.00	0.000176	0.32275	90 *
Pit F	2.688	5.376	11.16	0.003793	1.49886	86 *
Pit G	2.188	4.376	13.71	0.003087	1.35031	82 *
Pit H	2.688	5.376	11.16	0.003793	1.49586	82 *
Pit I	1.250	2.500	24.00	0.001764	1.02062	82 *
Pit W	0.375	0.750	80.00	0.000529	0.55902	83
Pit X	1.750	3.500	17.14	0.002469	1.20761	83
Pit Y	2.625	5.250	11.43	0.003704	1.47902	83
Pit Z	1.313	2.625	22.86	0.001852	1.04583	83

(*) **Note:** The Elevations reported here are all relative and were calculated using data from several survey trips to the area. The control point used was assigned an arbitrary 100 foot elevation. The highlighted test pits that are those located within the leach field foot print.

	Test Pits Located in footprint of Drain Field
	Test Pits Located in footprint of Drain Field (Percolation Rate Used for Drainfield Sizing)

Figure 1

Drain Field Design and Associated Topographic Map



NORTH LILY

FIGURE 1
DRAIN FIELD DESIGN AND SITE MAP

jbr environmental consultants, inc.
Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada

DESIGN BY	DRAWN BY	CH'D BY	SCALE
JS	CP		1"=100'

REVISION	DATE DRAWN
	2/10/01
	3/6/01
	7/01/01
	2/26/02

North Lily\nlily1-2c.dwg

Figure 2

Typical Trench Layout and Lateral Connection

FIGURE-2

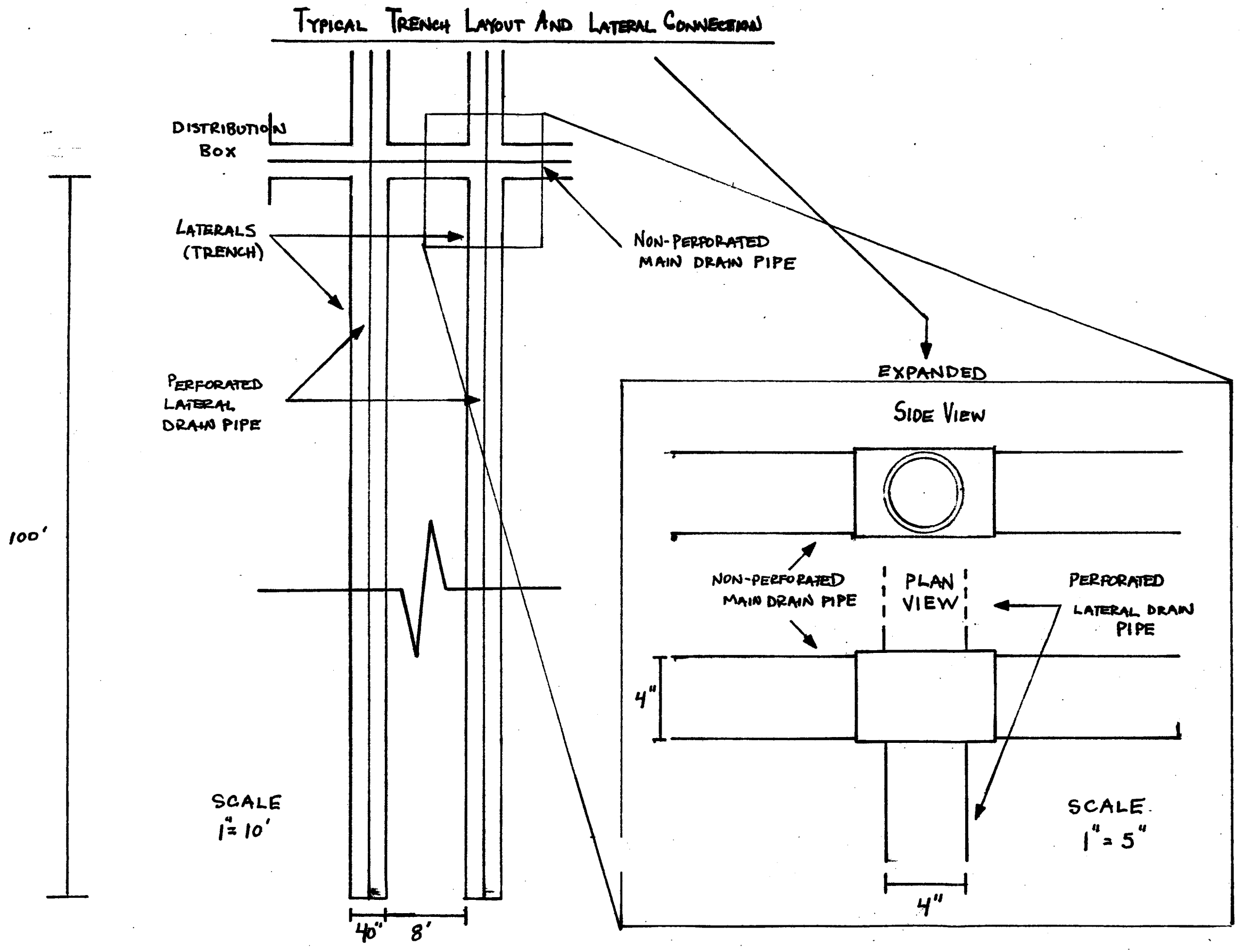
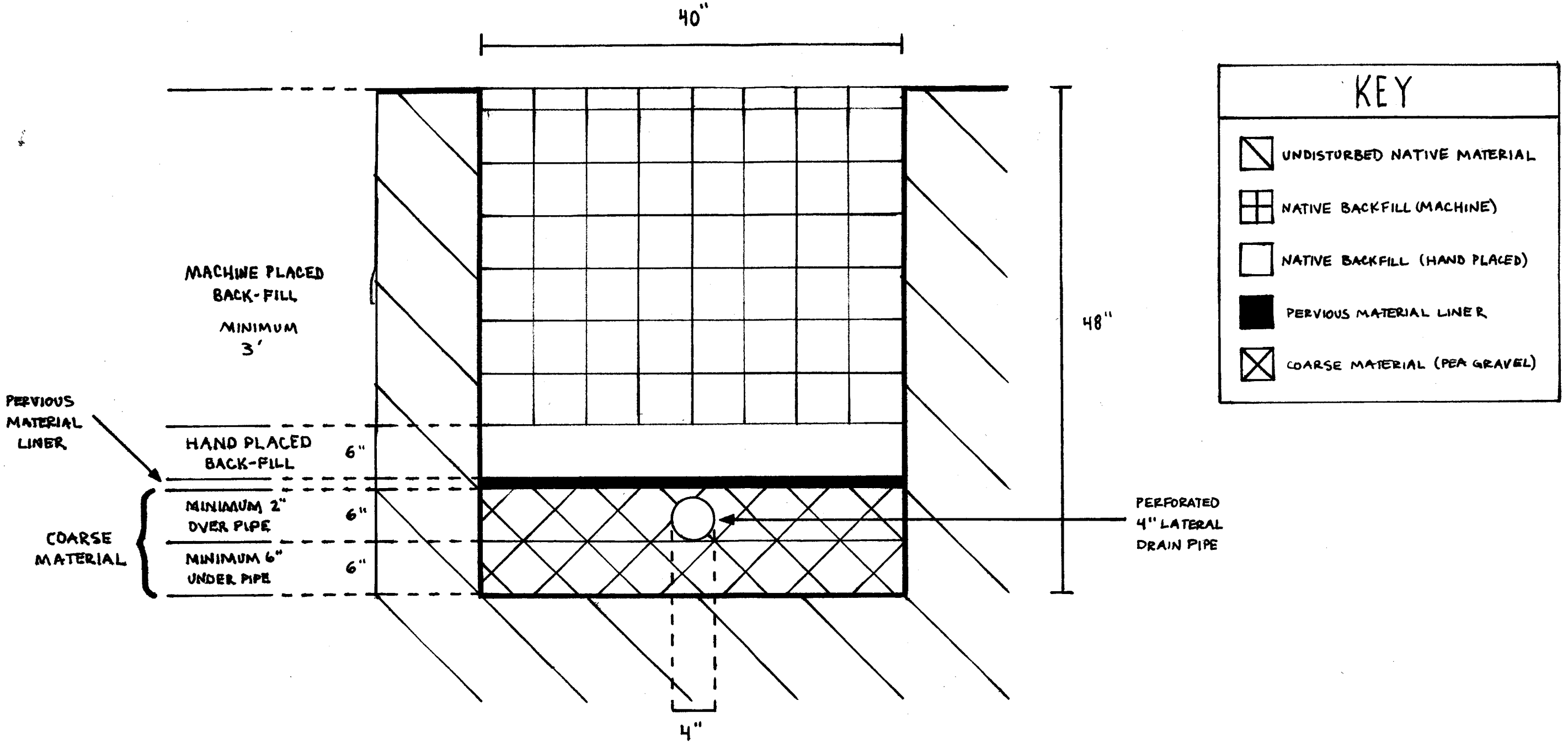

TYPICAL TRENCH LAYOUT AND LATERAL CONNECTION
DISTRIBUTION BOX
LATERALS (TRENCH)
PERFORATED LATERAL DRAIN PIPE
NON-PERFORATED MAIN DRAIN PIPE
EXPANDED
SIDE VIEW
NON-PERFORATED MAIN DRAIN PIPE
PLAN VIEW
PERFORATED LATERAL DRAIN PIPE
4"
4"
SCALE 1" = 5"
100'
40"
8'
SCALE 1" = 10'

Figure 3

Typical Lateral Trench Cross-Section

NORTH LILY

A TYPICAL LATERAL TRENCH X-SECTION



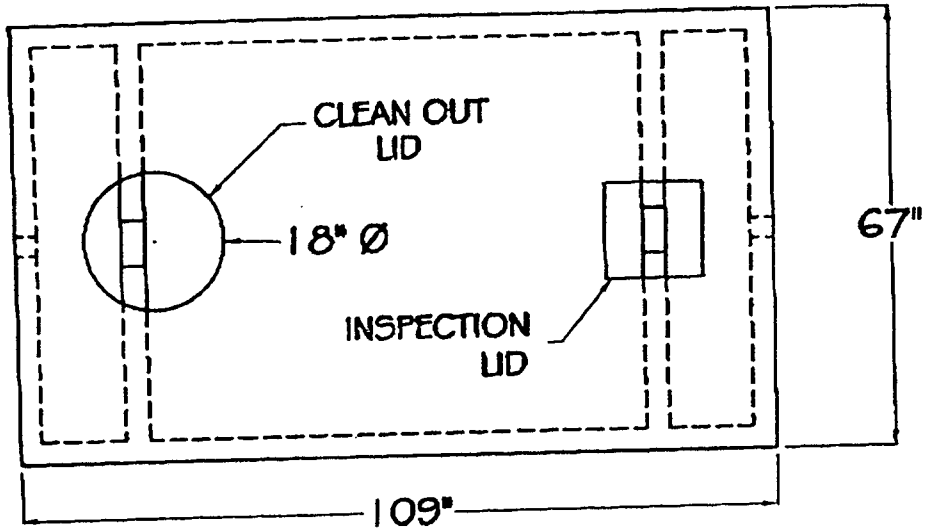
KEY

- UNDISTURBED NATIVE MATERIAL
- NATIVE BACKFILL (MACHINE)
- NATIVE BACKFILL (HAND PLACED)
- PERVIOUS MATERIAL LINER
- COARSE MATERIAL (PEA GRAVEL)

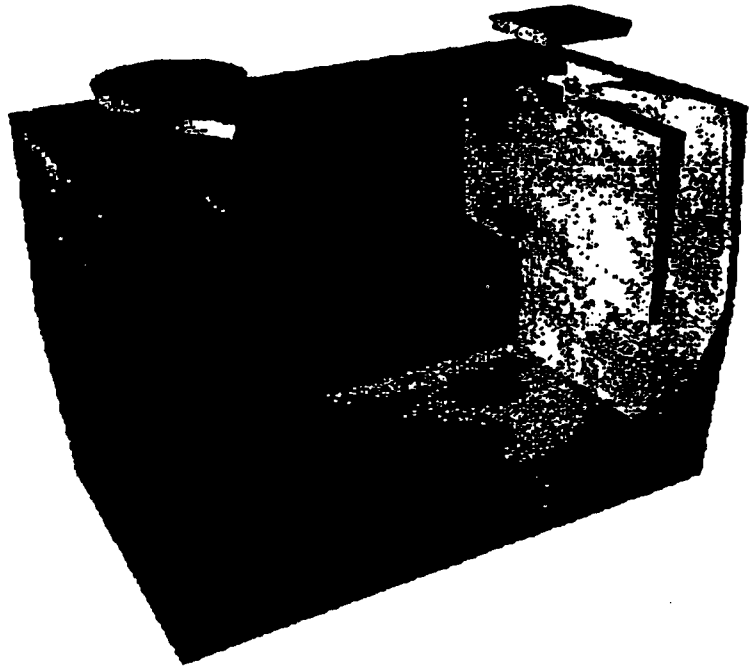
J. SAGE 03/06/01

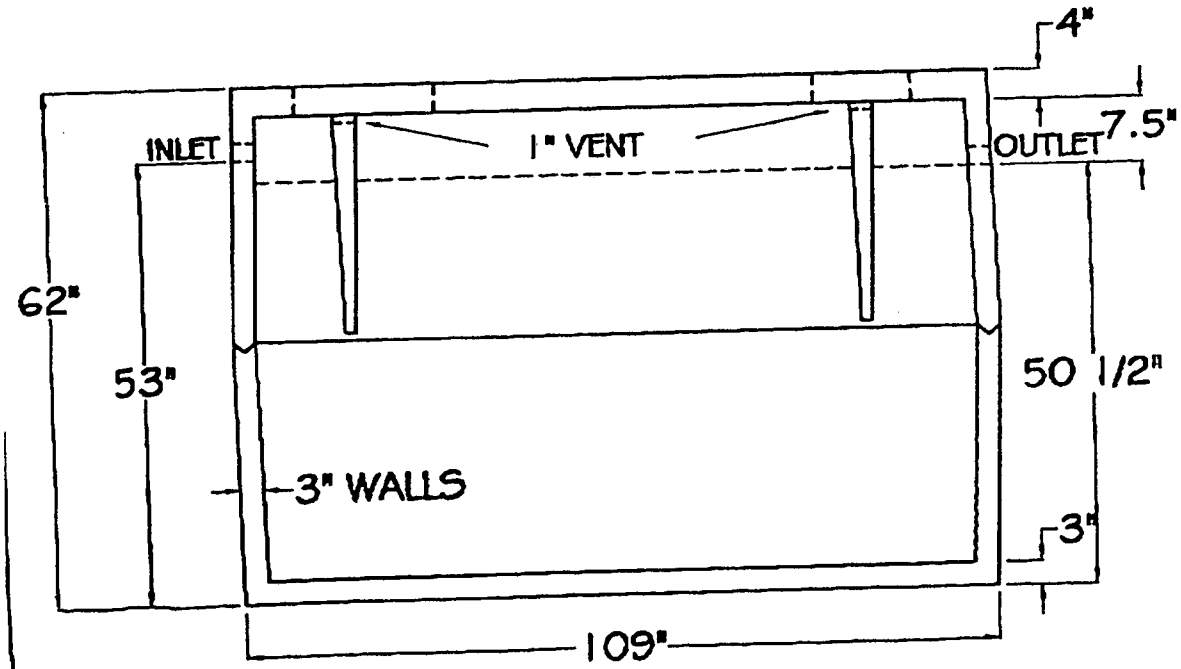
Figure 4

Distribution Box Design and Dimensions



Top View





Side View

BURIAL VAULT
THORPE
CONCRETE PRODUCTS

1250 Gallon Two-piece Septic Tank
Capacity: 1250 Gallon
Weight: 9000 Pounds
Excavation: 11' x 7'6"
Flow Line 4'5"
Butyl Rope Sealant
6x6-6x6 Welded Wire Reinforcement
#4 Rebar @ 12" o/c Across Lid Span
Concrete 4000 PSI

Figure 5

Drain Field As-Built

POWER LINE

W-POLE C.P.

E-POLE C.P.

DISTRIBUTION BOX NO. 2

LEACH FIELD

Center Line HWY 6

R.O.W.

CLASS IIIb INDUSTRIAL LANDFILL (FORMER BARREN POND)

FORMER PREG. POND (RECLAIMED)

DISTRIBUTION BOX NO. 1

FORMER OVERFLOW POND (RECLAIMED)

RECLAIMED HEAP LEACH MOUND BOUNDARY

60 0 60 FEET

EXPLANATION

- - - - - LOCATION OF FORMER SOLUTION PONDS

——— CLASS IIIb LAND FILL

DRAIN FIELD

——— 4 INCH SOLID PVC PIPE

——— 4 INCH PERFORATED PVC LATERALS

NORTH LILY

FIGURE 5
DRAIN FIELD AS BUILT

jbr environmental consultants, inc.
Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	5/16/01 1/14/02 2/26/02	

North Lily\nillyl-3B.dwg

Appendix A

Site Photographs

1. PLACEMENT OF THE NO. 1 DISTRIBUTION BOX AND CONNECTION OF THE PERIMETER DRAIN LINE TO THE GRAVITY FED DISTRIBUTION LINE.

2. PLACEMENT OF GRAVEL AND GEOFABRIC AROUND THE NO. 1 DISTRIBUTION BOX.

NORTH LILY

APPENDIX A
PHOTO PAGE 1

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DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	8/1/01	

3. WATER FLOW FROM THE HEAP TO THE DRAIN FIELD AS SEEN THROUGH THE NO. 1 DISTRIBUTION BOXES' CLEAN-OUT LID.

4. JBR EMPLOYEE PLACING THE GRANITE SEED MIX IN THE HEAP

NORTH LILY

APPENDIX A
PHOTO PAGE 2

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DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	8/1/01	

5. EMPLOYEES OF LAWN WORLD SPRAYING HERBICIDE ONTO THE WHITE CLOVER NOXIOUS WEED.

6. EXCAVATION OF DRAIN FIELD TRENCHES

NORTH LILY

APPENDIX A
PHOTO PAGE 3

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Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada

DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	7/16/01	

7. TYPICAL 4-6" OF COARSE GRAVEL ABOVE AND BELOW DRAIN LINE

NORTH LILY

APPENDIX A
PHOTO PAGE 4

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DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	7/16/01	

8. IMPERVIOUS GEO-FABRIC PLACED OVER THE COARSE GRAVEL

9. DISTRIBUTION BOX LOCATED AT BEGINNING OF DRAIN FIELD

NORTH LILY

APPENDIX A
PHOTO PAGE 5

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DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	7/16/01	

10. VIEW FROM NORTH LOOKING SOUTH ACROSS GRADED DRAIN FIELD AREA.

11. VIEW FROM WEST LOOKING EAST ACROSS GRADED DRAIN FIELD AREA.

NORTH LILY

APPENDIX A
PHOTO PAGE 6

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DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	7/16/01	

12. A VIEW TO THE SOUTHEAST OF THE MILL BUILDING AS IT IS BEING DEMOLISHED.

13. LOOKING INTO THE NEWLY CONSTRUCTED CLASS IIIB INDUSTRIAL LANDFILL, THE FORMER BARREN POND.

NORTH LILY

APPENDIX A
PHOTO PAGE 7

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DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	8/1/01	

14. A VIEW OF THE PARTIALLY CAPPED CLASS IIIB INDUSTRIAL LANDFILL.

15. LOOKING TO THE NORTH AT THE FORMER HEAP (RIGHT SIDE) AND PREGNANT POND (LEFT SIDE), NOW RECLAIMED.

NORTH LILY

APPENDIX A
PHOTO PAGE 8

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DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	8/1/01	

16. STANDING ON THE LOCATION OF THE FORMER MILL BUILDING, LOOKING TO THE SOUTHEAST AT THE RECLAIMED SITE AND THE NEWLY INSTALLED FENCE.

17. A VIEW TO THE NORTHEAST AT THE HEAP IN THE MIDDLE RIGHT AND THE AREA WHERE THE DRAIN FIELD IS LOCATED (MIDDLE TO LOWER LEFT).

NORTH LILY

APPENDIX A
PHOTO PAGE 9

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DESIGN BY	DRAWN BY	CH'D BY	SCALE	DATE DRAWN	REVISION
JS	CP		1"=60'	8/1/01	

Appendix B

Nevada Meteoric Water Mobility Procedure

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : JBR Environmental Consultants

SVL JOB No. : 95406
SVL SAMPLE No.: 242616

CLIENT SAMPLE ID: SCH-S
Sample Collected: 8/22/00 13:00
Sample Receipt : 8/29/00
Date of Report : 9/19/00

% Moisture: 0.4%
Matrix: ESOIL
Extract: MWMP 9/06/00

Determination	Result	Units	Method	Test Date	Reference
% Passing -200	15.1	g	Sieve	9/06/00	
Moisture to Sat.	636	mL		9/06/00	
MWMP TIME	24.0	(hr)	MWMP	9/06/00	
pH	8.85		150.1	9/12/00	1
pH LIXIVIANT	5.86		150.1	9/06/00	1
pH Paste	9.12		ASA M9	9/15/00	
Weight	5.00	kg		9/06/00	
TDS	510	mg/L Ext	160.1	9/11/00	1
Cyanide-WAD	<0.01	mg/L Ext	1677	9/14/00	
Sodium	85.8	mg/L Ext	200.7	9/14/00	1
Nitrite-N	1.68	mg/L Ext	300.0	9/11/00	1
Nitrate-N	19.7	mg/L Ext	300.0	9/11/00	1
Sulfate, SO4	70.4	mg/L Ext	300.0	9/11/00	1
Silver	<0.005	mg/L Ext	200.7	9/14/00	1
Arsenic	0.135	mg/L Ext	206.2	9/13/00	1
Barium	0.146	mg/L Ext	200.7	9/14/00	1
Cadmium	<0.002	mg/L Ext	200.7	9/14/00	1
Chromium	<0.006	mg/L Ext	200.7	9/14/00	1
Mercury	0.0003	mg/L Ext	245.1	9/12/00	1
Lead	0.089	mg/L Ext	239.2	9/14/00	1
Selenium	0.004	mg/L Ext	270.2	9/14/00	1

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Becke Johnson Date 9/19/00
9/19/00 13:30

SVL ANALYTICAL, INC.
Old Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : JBR Environmental Consultants

SVL JOB No. : 95406
SVL SAMPLE No.: 242617

CLIENT SAMPLE ID: SCH-N
Sample Collected: 8/22/00 13:30
Sample Receipt : 8/29/00
Date of Report : 9/19/00

% Moisture: 0.5%
Matrix: ESOIL
Extract: MWMP 9/06/00

Determination	Result	Units	Method	Test Date	Reference
% Passing -200	10.0	g	Sieve	9/06/00	
Moisture to Sat.	579	mL		9/06/00	
MWMP TIME	24.0	(hr)	MWMP	9/06/00	
pH	8.56		150.1	9/12/00	1
pH LIXIVIANT	5.86		150.1	9/06/00	1
pH Paste	8.74		ASA M9	9/15/00	
Weight	5.00	kg		9/06/00	
TDS	1890	mg/L Ext	160.1	9/11/00	1
Cyanide-WAD	<0.01	mg/L Ext	1677	9/14/00	
Sodium	572	mg/L Ext	200.7	9/14/00	1
Nitrite-N	2.38	mg/L Ext	300.0	9/11/00	1
Nitrate-N	9.81	mg/L Ext	300.0	9/11/00	1
Sulfate, SO4	1680	mg/L Ext	300.0	9/11/00	1
Silver	<0.005	mg/L Ext	200.7	9/14/00	1
Arsenic	0.062	mg/L Ext	206.2	9/13/00	1
Barium	0.015	mg/L Ext	200.7	9/14/00	1
Cadmium	<0.002	mg/L Ext	200.7	9/14/00	1
Chromium	<0.006	mg/L Ext	200.7	9/14/00	1
Mercury	0.0004	mg/L Ext	245.1	9/12/00	1
Lead	0.076	mg/L Ext	239.2	9/14/00	1
Selenium	0.013	mg/L Ext	270.2	9/14/00	1

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 9/19/00
9/19/00 13:30

SVL ANALYTICAL, INC.

Quality Control Report

Part I Prep Blank and Laboratory Control Sample

Client :JBR Environmental Consultants

SVL JOB No. :95406

Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found		LCS %R	Analysis Date
Silver	200.7	ESOIL	mg/L Ext	<0.005	1.00	0.996	99.6	9/14/00
Barium	200.7	ESOIL	mg/L Ext	<0.002	1.00	0.995	99.5	9/14/00
Cadmium	200.7	ESOIL	mg/L Ext	<0.002	1.00	1.02	102.0	9/14/00
Chromium	200.7	ESOIL	mg/L Ext	<0.006	1.00	0.999	99.9	9/14/00
Sodium	200.7	ESOIL	mg/L Ext	<0.1	20.0	19.4	97.0	9/14/00
Arsenic	206.2	ESOIL	mg/L Ext	<0.001	0.050	0.045	90.0	9/13/00
Lead	239.2	ESOIL	mg/L Ext	<0.001	0.050	0.049	98.0	9/14/00
Selenium	270.2	ESOIL	mg/L Ext	<0.001	0.050	0.044	88.0	9/14/00
Mercury	245.1	ESOIL	mg/L Ext	<0.0002	0.0050	0.0053	106.0	9/12/00
Nitrite-N	300.0	ESOIL	mg/L Ext	<0.05	3.65	3.80	104.1	9/11/00
Nitrate-N	300.0	ESOIL	mg/L Ext	<0.05	19.4	19.7	101.5	9/11/00
Sulfate, SO4	300.0	ESOIL	mg/L Ext	<0.3	18.4	19.5	106.0	9/11/00
Cyanide-WAD	1677	ESOIL	mg/L Ext	<0.01	2.0	2.0	100.0	9/14/00
pH	150.1	ESOIL		5.62	9.08	9.06	99.8	9/12/00
pH Paste	ASA M9	ESOIL		N/A	8.60	8.60	100.0	9/15/00
TDS	160.1	ESOIL	mg/L Ext	<10	337	288	85.5	9/11/00

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

9/19/00 13:05

SVL ANALYTICAL, INC.

Quality Control Report

Part II Duplicate and Spike Analysis

Client :JBR Environmental Consultants — SVL JOB No :95406

Test	Method	Matrix	QC SAMPLE ID Units	Result	Duplicate or MSD Found	RPD%	Matrix Spike Result	SPK ADD		%R	Test Date
Ag	200.7	ESOIL	1 mg/L Ex	<0.005	<0.005	UDL	0.856	1.00	A	85.6	9/14/00
Ba	200.7	ESOIL	1 mg/L Ex	0.146	0.145	0.7	1.14	1.00		99.4	9/14/00
Cd	200.7	ESOIL	1 mg/L Ex	<0.002	<0.002	UDL	1.02	1.00		102.0	9/14/00
Cr	200.7	ESOIL	1 mg/L Ex	<0.006	<0.006	UDL	1.01	1.00		101.0	9/14/00
Na	200.7	ESOIL	1 mg/L Ex	85.8	85.2	0.7	103	20.0		86.0	9/14/00
As	206.2	ESOIL	1 mg/L Ex	0.135	0.146	7.8	0.186	0.0500		102.0	9/13/00
Pb	239.2	ESOIL	1 mg/L Ex	0.089	0.095	6.5	0.161	0.0500		144.0	9/14/00
Se	270.2	ESOIL	1 mg/L Ex	0.004	0.004	0.0	0.052	0.0500		96.0	9/14/00
Hg	245.1	ESOIL	1 mg/L Ex	0.0003	0.0003	0.0	0.0014	0.0010		110.0	9/12/00
NO2-N	300.0	ESOIL	1 mg/L Ex	1.68	1.61	4.3	11.7	10.0		100.2	9/11/00
NO3-N	300.0	ESOIL	1 mg/L Ex	19.7	19.9	1.0	30.8	10.0		111.0	9/11/00
SO4	300.0	ESOIL	1 mg/L Ex	70.4	71.3	1.3	123	50.0		105.2	9/11/00
CN WAD	1677	ESOIL	1 mg/L Ex	<0.01	0.1	0.0	0.1	0.100		100.0	9/14/00
pH	150.1	ESOIL	1	8.85	8.86	0.1	N/A	N/A		N/A	9/12/00
TDS	160.1	ESOIL	1 mg/L Ex	510	497	2.6	N/A	N/A		N/A	9/11/00

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100)

UDL = Both SAM & DUP not detected.

RPD = (|SPK - MSD|/((SPK + MSD)/2) * 100)

M in Duplicate/MSD column indicates MSD.

SPK ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 242616 Client Sample ID: SCH-S

Appendix C

Hazardous Materials Handling and Disposal Documentation

- Notification of Regulated Waste Activities
- Hazardous Waste Manifests
- Documentation from TSD (Safety Kleen)
- MSDS's
- Waste Analysis Reports

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0028 Expires 10/31/97
GSA No. 0245-EPA-

Please refer to Section V, Line-by-Line Instructions for Completing EPA Form 8700-12 before completing this form. The information requested here is required by law (Section 3010 of the Resource Conservation and Recovery Act).

Notification of Regulated Waste Activity

EPA United States Environmental Protection Agency

Date Received (For Official Use Only)

I. Installation's EPA ID Number *(Mark 'X' in the appropriate box)*

[X] A. Initial Notification [ ] B. Subsequent Notification *(Complete item C)*

C. Installation's EPA ID Number

II. Name of Installation *(Include company and specific site name)*

NORTH LILY SILVER CITY FAC.

III. Location of Installation *(Physical address not P.O. Box or Route Number)*

Street

3 MILES SOUTH OF EUREKA

Street *(Continued)*

City or Town: EUREKA | State: UT | Zip Code: 84628-

County Code: | County Name: JUAB

IV. Installation Mailing Address *(See instructions)*

Street or P.O. Box

1800 GLENARM PLACE SUITE 210

City or Town: DENVER | State: CO | Zip Code: 80202-

V. Installation Contact *(Person to be contacted regarding waste activities at site)*

Name *(Last)*: FLECHNER | *(First)*: STEPHEN

Job Title: CEO | Phone Number *(Area Code and Number)*: 303-294-0427

VI. Installation Contact Address *(See instructions)*

A. Contact Address Location: [ ] Mailing: [X] | B. Street or P.O. Box:

City or Town: | State: | Zip Code: -

VII. Ownership *(See instructions)*

A. Name of Installation's Legal Owner

NORTH LILY MINING CO

Street, P.O. Box, or Route Number

1800 GLENARM PLACE SUITE 210

City or Town: DENVER | State: CO | Zip Code: 80202-

Phone Number *(Area Code and Number)*: 303-294-0427 | B. Land Type: P | C. Owner Type: P | D. Change of Owner Indicator: Yes [ ] No [ ] | (Date Changed) Month Day Year:

GSA No. 0246-

ID - For Official Use Only

VIII. Type of Regulated Waste Activity *(Mark 'X' in the appropriate boxes. Refer to instructions)*

A. Hazardous Waste Activity

1. Generator (See Instructions)
   - [ ] a. Greater than 1000kg/mo (2,200 lbs.)
   - [X] b. 100 to 1000 kg/mo (220-2,200 lbs.)
   - [ ] c. Less than 100 kg/mo (220 lbs)
2. Transporter (Indicate Mode in boxes 1-5 below)
   - [ ] a. For own waste only
   - [ ] b. For commercial purposes

Mode of Transportation
- [ ] 1. Air
- [ ] 2. Rail
- [ ] 3. Highway
- [ ] 4. Water
- [ ] 5. Other - specify

3. [ ] Treater, Storer, Disposer (at installation) Note: A permit is required for this activity, see instructions.
4. Hazardous Waste Fuel
   - [ ] a. Generator Marketing to Burner
   - [ ] b. Other Marketers
   - [ ] c. Boiler and/or Industrial Furnace
     - [ ] 1. Smelter Deferral
     - [ ] 2. Small Quantity Exemption

Indicate Type of Combustion Device(s)
- [ ] 1. Utility Boiler
- [ ] 2. Industrial Boiler
- [ ] 3. Industrial Furnace

5. [ ] Underground Injection Control

B. Used Oil Recycling Activities

1. Used Oil Recycling Marketer
   - [ ] a. Marketer Directs Shipment of U Oil to Off-Specification Burner
   - [ ] b. Marketer Who First Claims the Used Oil Meets the Specificatio
2. Used Oil Burner - Indicate Type(s) of Combustion Device
   - [ ] a. Utility Boiler
   - [ ] b. Industrial Boiler
   - [ ] c. Industrial Furnace
3. Used Oil Transporter - Indicate Type(s) of Combustion Device(s)
   - a. Transporter
   - b. Transfer Facility
4. Used Oil Processor/Re-refiner - Indicate Type(s) of Activity(ies)
   - [ ] a. Process
   - [ ] b. Re-refine

IX. Description of Regulated Wastes *(Use additional sheets if necessary)*

A. Characteristics of Nonlisted Hazardous Wastes. *(Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles; See 40 CFR Parts 261.20 - 261.24)*

1. Ignitable (D001)	2. Corrosive (D002)	3. Reactive (D003)	4. Toxicity Characteristic	(List specific EPA hazardous waste number(s) for the Toxicity characteristic contaminant(s))
X	X		X	D008

B. Listed Hazardous Wastes. *(See 40 CFR 261.31 - 33; See instructions if you need to list more than 12 waste codes.)*

1	2	3	4	5	6
7	8	9	10	11	12

C. Other Wastes. *(State or other wastes requiring a handler to have an I.D. number; See instructions.)*

1	2	3	4	5	6

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature	Name and Official Title *(Type or print)*	Date Signed
[signature]	STEPHEN E. FLECHNER, President	22 NOV. 2000

XI. Comments

One time site cleanup

Note: Mail completed form to the appropriate EPA Regional or State Office. *(See Section III of the booklet for addresses.)*

ease print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. UTD000001026 | Manifest Document No. 74441 | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
NORTH LILY MINING COMPANY
3 MILES SOUTH OF EUREKA ON US H
EUREKA, UT 84093
4. Generator's Phone ( )

A. State Manifest Document Number
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone

5. Transporter 1 Company Name: Superior Special Services, Inc.
6. US EPA ID Number: WID988668543
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
SUPERIOR SPECIAL SERVICES, INC
5736 West Jefferson
Phoenix, AZ 85043
10. US EPA ID Number: AZD983473539

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Personal Protective Equipment, 9, 2077, PGII		02	DM	00500		
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
FURNACE SURFACE [illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Emergency Contact# 1 800 633 4005
Document [illegible]

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[signature]			

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[signature]			

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

NEOR TOP LIT

Style F15 LABELMASTER® (800) 621-5808 www.labelmaster.com

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER USING SOYBEAN INK — PRINTED WITH SOY INK

GENERATOR COPY

JUL-30 2001 10:20

Emergency Contact Telephone Number
Emergency Coordinator:
(801) 943-9768 (Box 5000)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. U.T.P.0.0.0.0.0.1.0.2.6
Manifest Document No. N.L.M.0.1
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
North Lily Mining Company
1800 Glenarm Place, Suite 210
Denver, CO 80202
4. Generator's Phone (303) 294-0427

A. State Manifest Document Number
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone (801) 508-7605
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone (801) 323-8100

5. Transporter 1 Company Name
Safety-Kleen (TG) Inc.
6. US EPA ID Number
S.C.R.0.0.0.0.7.4.5.9.1

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Safety-Kleen Aragonite Facility
11600 North Aptus Road
Aptus, UT 84029
10. US EPA ID Number
U.T.D.9.8.1.5.2.2.1.7.7

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	Non-hazardous, used oil and water		005	DM	01800	P	NA
b.	Non-hazardous, used oil and water		001	DF	00200	P	NA
c.							
d.							

J. Additional Descriptions for Materials Listed Above
J(a): AP8000690, Drum # DM-5
J(b): AP8000690 Drum # DM-2

K. Handling Codes for Wastes Listed Above
T07

15. Special Handling Instructions and Additional Information
Load # 6138
Generator Location:
3 miles south of Eureka on US Highway 6, Eureka, Utah

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

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Printed/Typed Name: Elwin R Ewell
Signature: Elwin Ewell
Month 03 Day 09 Year 01

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Tracy Hicks
Signature: Tracy Hicks
Month 03 Day 09 Year 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year

ORIGINAL — RETURN TO GENERATOR

TOTAL P.02

Form Approved. OMB No. 2050-0039. Expires 9-30-99

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: UTP000001026 | Manifest Document No.: 060114 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
NORTH LILY MINING COMPANY
3 MI SOUTH OF EUREKA HWY 6 EUREKA, UT 84628
4. Generator's Phone (801) 943-4144 ATTN: SCOTT PAGE

A. State Manifest Document Number
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone 801-508-7605

5. Transporter 1 Company Name: SAFETY KLEEN (TGF) INC. | 6. US EPA ID Number: SCR000074591
7. Transporter 2 Company Name | 8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
SAFETY-KLEEN (GRASSY MOUNTAIN). INC.
3 MI EAST, 7 MI NORTH OF EXIT 41 OFF I-80
CLIVE, UT | 10. US EPA ID Number: UTD991301746
G. State Facility's ID
H. Facility's Phone (801) 323-8900

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, WASTE SODIUM HYDROXIDE, SOLID, N.O.S., 8, UN1823, PGII	X	006	DM	3600	P	D010
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. GM01-0308
ERG 154

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
SWO# 40198

24 HOUR EMERGENCY NUMBER: 3E Co. 1-800-451-8346

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: STEVE ASHLEY AS AGT. FOR N. LILY | Signature: Steve R Ashley AS AGT. N. LILY FOR | Month Day Year: 10 6 01

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: MARSHALL KEELING | Signature | Month Day Year: 10 6 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space
100.00 Most C

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: SONIA CANUS | Signature: Sonia Canus | Month Day Year: 10 6 01

EPA Form 8700-200 (Rev. 9-88) Previous editions are obsolete.

585-7521

ORIGINAL – RETURN TO GENERATOR

Emergency Contact Telephone Number
Emergency Coordinator:
(801) 943-9768 (Box 5000)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: U T P 0 0 0 0 0 1 0 2 6
Manifest Document No.: N L M 0 2
2. Page 1 of 2
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
North Lily Mining Company
1800 Glenarm Place, Suite 210
Denver, CO 80202
4. Generator's Phone (303) 294-0427

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: Safety-Kleen (TG) Inc.
6. US EPA ID Number: S C R 0 0 0 0 0 7 4 5 9 1
C. State Transporter's ID
D. Transporter's Phone (801) 508-7605

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Safety-Kleen Grassy Mountain Facility
3 Miles East, 7 Miles North of Exit 41, I-80
Clive, UT 84029
10. US EPA ID Number: U T D 9 9 1 3 0 1 7 4 8
G. State Facility's ID
H. Facility's Phone (801) 323-8716

	HM	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.		Waste flammable liquid, n.o.s., 3, UN1993, PGII (D001)	001	DM	Est. 00100	P	D001
b.	X	RQ waste sodium cyanide, 6.1, UN1689, PGI (P106, D003)	001	DF	Est. 00060	P	P106, D003
c.	X	RQ waste silver nitrate, 5.1, UN1493, PGII (D011)	001	DF	Est. 00015	P	D001, D011
d.		Waste, toxic solid, organic, n.o.s., (lead acetate), 6.1, UN2811, PGII	001	DF	Est. 00015	P	U144, D008

J. Additional Descriptions for Materials Listed Above
11a) GM 01-0005; Labpack, Drum # 098900-01
11b) GM 01-0005; Labpack, Drum # 02
11c) GM 01-0005; Labpack, Drum # 989-03
11d) GM 01-0005; Labpack, Drum # 989-04

K. Handling Codes for Wastes Listed Above

SWO# 38639

15. Special Handling Instructions and Additional Information
Site Location: 3 miles south of Eureka on US Highway 6
Eureka, Utah

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Elwin R Ewell | Signature: Elw R Ew | Month Day Year: 03 09 01

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Gary Hicks | Signature: Gary Hicks | Month Day Year: 03 09 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
0301001518C-F
Printed/Typed Name: Jackie Caines | Signature: Jackie Caines | Month Day Year: 03 [illegible]

ORIGINAL — RETURN TO GENERATOR

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator's US EPA ID No.	Manifest Document No.	22. Page	Information in the shaded areas is not required by Federal law.
UTP00000126	~~NLM01~~ NLM02	2	

23. Generator's Name: North Lily Mining Company

L. State Manifest Document Number:

M. State Generator's ID:

24. Transporter Company Name: Safety-Kleen (TG) Inc.

25. US EPA ID Number: SCR000074591

N. State Transporter's ID:

O. Transporter's Phone: (801) 508-7605

26. Transporter ___ Company Name:

27. US EPA ID Number:

P. State Transporter's ID:

Q. Transporter's Phone:

	28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	29. Containers No.	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a.	Waste corrosive liquid, inorganic, n.o.s., 8, UN3266, PGII		001	DF	Est. 200	P	D002, D008, D011
b.	Waste hydrochloric acid solution, 8, UN1789, PGII		001	DM	Est. 200	P	D002
c.	Non-hazardous waste		001	DM	Est. 400	P	NA
d.	Non-hazardous waste		002	DM	300	P	NA
e.	Waste corrosive liquid, n.o.s., (hydrochloric acid and water), 8, UN1760, PGII		001	DM	400	P	NA
f.							
g.							
h.							
i.							

S. Additional Descriptions for Materials Listed Above

28a) GM 01-0005; Labpack; Drum # 989-05
28b) GM 01-0005; Labpack; Drum # 989-06
28c) GM 00-0626; Drum # DM-7
28d) GM 01-004; Drum # DM-8, DM-9

T. Handling Codes for Wastes Listed Above:

32. Special Handling Instructions and Additional Informatic

28e) GM 00-0627; Drum # DM-11

TRANSPORTER

33. Transporter ___ Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

34. Transporter ___ Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

FACILITY

35. Discrepancy Indication Space

200100/318-G-K

Style F15 REV-6 LABELMASTER, Div. of AMERICAN LABELMARK CO., CHICAGO, IL 60646 800-621-5808

EPA Form 8700-22A (Rev. 9-88) Previous editions are obsolete.

GM 00-0624
BORAX..

RECEIVED FEB 13 2001

safety-kleen®

12/18/00

J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093

Dear Customer,

Safety-Kleen (Lone and Grassy Mountain), Inc. (Grassy Mountain Facility) is pleased to provide you with pricing for the management of the following waste stream:

Generator: **NORTH LILY MINING COMPANY** EPA ID #: UTP000001026
Acceptance #: **GM00-0624** Waste Name: BORAX PENTAHYDRATE

Bill Description	Price	UM
30 G DM DISPOSAL	55.000	DM
STATE NON-RCRA FEE	2.500	T

The waste acceptance number **GM00-0624** should be included on all correspondence, manifests, and waste labels of any containers that are sent to the Grassy Mountain Facility.

The price quote is based on the waste stream profile information and waste sample composition submitted by your company for this waste. Should any shipments of waste be non-conforming to the profile description or sample analysis, this may result in the waste becoming unacceptable for management by our facility. The Grassy Mountain Facility will notify you of any non-conformance as well as potential alternate management methods and charges that may be applicable should this problem arise.

To schedule a delivery or pick-up of waste, please contact our Customer Service Group at (800) 243-0783. Should you have questions regarding our management of your waste, please contact your local Technical Sales Representative or the facility Customer Service Group.

Thank you for your consideration of the Grassy Mountain Facility. We appreciate the opportunity to be of service to your company.

Sincerely,

Eva McCroskey

Eva McCroskey
Profile Approvals

P.O. BOX 22750 SALT LAKE CITY, UT 84122 801-323-8900 FAX 801-323-8990

NOTIFICATION OF WASTE ACCEPTANCE

12/18/00

Safety-Kleen, Grassy Mountain Facility

CUSTOMER INFORMATION
EPA ID#: UTP000001026
NORTH LILY MINING COMPANY
3 MILES SOUTH OF EUREKA HIGHWAY 6
EUREKA, UT 84628-
CONTACT: SCOTT PAGE
PHONE: (801) 943-4144

INVOICE INFORMATION
REF #: 504832
J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093
CONTACT:
PHONE: (801) 943-4144

PROFILE SHEET #: 8000688
WASTE NAME: BORAX PENTAHYDRATE

WASTE ACCEPTANCE #: GM00-0624

Thank you for selecting Safety-Kleen, Grassy Mountain for your waste management requirements. Your waste stream has been reviewed and is acceptable for management at our facility based on the information provided on the profile sheet number listed above and conditions listed below. Our facility has the necessary permits to allow the storage, treatment, or disposal of this waste. The above referenced acceptance number should be listed on all shipping documents and correspondence. Please retain these documents for your records and future reference.

Please contact Customer Service at 1-800-243-0783 should you have any questions. To schedule a shipment, contact Grassy Mountain Customer Service at 1-800-243-0783.

ACCEPTANCE INFORMATION

The waste stream identified by the reference number above is **acceptable for disposal.**

This waste is acceptable for delivery beginning on 12/18/00 thru 12/18/01, at which time an update review may be required for continued acceptability.

Comments:
ON SITE TSD/ RCRA CELL/ NON-RCRA CERTIFICATION ON FILE/ FINGERPRINT ON ARRIVAL

Shipping Requirements:
Acceptance number(GM00-0624) must be marked on top of drum(s).

Type of Container: DRUM

P.O. BOX 22750 SALT LAKE CITY, UT 84122 801-323-8900 FAX 801-323-8990

12/18/00

PROFILE SHEET #: 8000688 WASTE STREAM #: GM00-0624

WASTE STREAM ANALYSIS INFORMATION

Waste Name.....: BORAX PENTAHYDRATE
Physical State.....: SOLID
Process Producing Waste..: UNUSED CHEMICAL

EPA Waste Codes:
NONE

NS - NO SAMPLE

This analysis is solely for use by Safety-Kleen Grassy Mountain employees for the purpose of determining waste acceptability. No other claims are made or implied.

AUTHORIZATION

Approval: Eva McCroskey Date: 12/18/00

Approval: Brett Bushnell BSB Date: 02/06/01

Waste Stream #: **GM00-0624**

GM00-0626
SODA ASH

safety-kleen

RECEIVED FEB 13 2001

12/18/00

J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093

Dear Customer,

Safety-Kleen (Lone and Grassy Mountain), Inc. (Grassy Mountain Facility) is pleased to provide you with pricing for the management of the following waste stream:

Generator: **NORTH LILY MINING COMPANY** EPA ID #: UTP000001026
Acceptance #: **GM00-0626** Waste Name: SODA ASH

Bill Description	Price UM
5 G DM DISPOSAL	50.000 DM
STATE NON-RCRA FEE	2.500 T

The waste acceptance number **GM00-0626** should be included on all correspondence, manifests, and waste labels of any containers that are sent to the Grassy Mountain Facility.

The price quote is based on the waste stream profile information and waste sample composition submitted by your company for this waste. Should any shipments of waste be non-conforming to the profile description or sample analysis, this may result in the waste becoming unacceptable for management by our facility. The Grassy Mountain Facility will notify you of any non-conformance as well as potential alternate management methods and charges that may be applicable should this problem arise.

To schedule a delivery or pick-up of waste, please contact our Customer Service Group at (800) 243-0783. Should you have questions regarding our management of your waste, please contact your local Technical Sales Representative or the facility Customer Service Group.

Thank you for your consideration of the Grassy Mountain Facility. We appreciate the opportunity to be of service to your company.

Sincerely,

Eva McCroskey

Eva McCroskey
Profile Approvals

P.O. BOX 22750 SALT LAKE CITY, UT 84122 801-323-8900 FAX 801-323-8990

safety-kleen

NOTIFICATION OF WASTE ACCEPTANCE

12/18/00

Safety-Kleen, Grassy Mountain Facility

CUSTOMER INFORMATION
EPA ID#: UTP000001026
NORTH LILY MINING COMPANY
3 MILES SOUTH OF EUREKA HIGHWAY 6
EUREKA, UT 84628-
CONTACT: SCOTT PAGE
PHONE: (801) 943-4144

INVOICE INFORMATION
REF #: 504832
J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093
CONTACT:
PHONE: (801) 943-4144

PROFILE SHEET #: 8000686
WASTE NAME: SODA ASH

WASTE ACCEPTANCE #: GM00-0626

Thank you for selecting Safety-Kleen, Grassy Mountain for your waste management requirements. Your waste stream has been reviewed and is acceptable for management at our facility based on the information provided on the profile sheet number listed above and conditions listed below. Our facility has the necessary permits to allow the storage, treatment, or disposal of this waste. The above referenced acceptance number should be listed on all shipping documents and correspondence. Please retain these documents for your records and future reference.

Please contact Customer Service at 1-800-243-0783 should you have any questions. To schedule a shipment, contact Grassy Mountain Customer Service at 1-800-243-0783.

ACCEPTANCE INFORMATION

The waste stream identified by the reference number above is **acceptable for disposal.**

This waste is acceptable for delivery beginning on 12/18/00 thru 12/18/01, at which time an update review may be required for continued acceptability.

Comments:
ON SITE TSD/ RCRA CELL/ NON-RCRA CERTIFICATION ON FILE/ FINGERPRINT ON ARRIVAL

Shipping Requirements:
Acceptance number(GM00-0626) must be marked on top of drum(s).

Type of Container: DRUM

P.O. BOX 22750 SALT LAKE CITY, UT 84122 801-323-8900 FAX 801-323-8990

12/18/00

PROFILE SHEET #: 8000686 WASTE STREAM #: GM00-0626

WASTE STREAM ANALYSIS INFORMATION

Waste Name.....: SODA ASH
Physical State.....: SOLID
Process Producing Waste..: UNUSED CHEMICAL

EPA Waste Codes:
NONE

NS - NO SAMPLE

This analysis is solely for use by Safety-Kleen Grassy Mountain employees for the purpose of determining waste acceptability. No other claims are made or implied.

AUTHORIZATION

Approval: Eva McCroskey Date: 12/18/00

Approval: Brett Bushnell BSB Date: 12/06/01

Waste Stream #: **GM00-0626**

RECEIVED MAR 13 2001

safety-kleen

01/02/01

J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093

Dear Customer,

Safety-Kleen (Lone and Grassy Mountain), Inc. (Grassy Mountain Facility) is pleased to provide you with pricing for the management of the following waste stream:

Generator: **NORTH LILY MINING COMPANY** EPA ID #: UTP000001026
Acceptance #: **GM00-0625** Waste Name: PREMIX

Bill Description	Price	UM
55 G DM DISPOSAL	60.000	DM
STATE NON-RCRA FEE	2.500	T

The waste acceptance number **GM00-0625** should be included on all correspondence, manifests, and waste labels of any containers that are sent to the Grassy Mountain Facility.

The price quote is based on the waste stream profile information and waste sample composition submitted by your company for this waste. Should any shipments of waste be non-conforming to the profile description or sample analysis, this may result in the waste becoming unacceptable for management by our facility. The Grassy Mountain Facility will notify you of any non-conformance as well as potential alternate management methods and charges that may be applicable should this problem arise.

To schedule a delivery or pick-up of waste, please contact our Customer Service Group at (800) 243-0783. Should you have questions regarding our management of your waste, please contact your local Technical Sales Representative or the facility Customer Service Group.

Thank you for your consideration of the Grassy Mountain Facility. We appreciate the opportunity to be of service to your company.

Sincerely,

Eva McCroskey
Profile Approvals

P.O. BOX 22750 SALT LAKE CITY, UT 84122 801-323-8900 FAX 801-323-8990

NOTIFICATION OF WASTE ACCEPTANCE

01/10/01

Safety-Kleen, Grassy Mountain Facility

CUSTOMER INFORMATION
EPA ID#: UTP000001026
NORTH LILY MINING COMPANY
3 MILES SOUTH OF EUREKA HIGHWAY 6
EUREKA, UT 84628-
CONTACT: SCOTT PAGE
PHONE: (801) 943-4144

INVOICE INFORMATION
REF #: 504832
J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093
CONTACT:
PHONE: (801) 943-4144

PROFILE SHEET #: 8000687
WASTE NAME: PREMIX

WASTE ACCEPTANCE #: GM00-0625

Thank you for selecting Safety-Kleen, Grassy Mountain for your waste management requirements. Your waste stream has been reviewed and is acceptable for management at our facility based on the information provided on the profile sheet number listed above and conditions listed below. Our facility has the necessary permits to allow the storage, treatment, or disposal of this waste. The above referenced acceptance number should be listed on all shipping documents and correspondence. Please retain these documents for your records and future reference.

Please contact Customer Service at 1-800-243-0783 should you have any questions. To schedule a shipment, contact Grassy Mountain Customer Service at 1-800-243-0783.

ACCEPTANCE INFORMATION

The waste stream identified by the reference number above is **acceptable for disposal.**

This waste is acceptable for delivery beginning on 01/09/01 thru 01/09/02, at which time an update review may be required for continued acceptability.

Comments:
ON SITE TSD/ RCRA CELL/ NON-RCRA CERTIFICATION ON FILE/ DISPOSE IN DRUMS/ FINGERPRINT ON ARRIVAL

Shipping Requirements:
Acceptance number(GM00-0625) must be marked on top of drum(s).

Type of Container: DRUM

01/10/01

PROFILE SHEET #: 8000687 WASTE STREAM #: GM00-0625

WASTE STREAM ANALYSIS INFORMATION

Waste Name.....: PREMIX
Physical State.....: SOLID
Process Producing Waste..: UNUSED SURPLUS CHEMICAL MIX

EPA Waste Codes:
NONE

NS - NO SAMPLE

This analysis is solely for use by Safety-Kleen Grassy Mountain employees for the purpose of determining waste acceptability. No other claims are made or implied.

AUTHORIZATION

Approval: Eva McCroskey Date: 1/11/01

Approval: Brett Bushnell BSB Date: 03/05/01

Waste Stream #: **GM00-0625**

safety-kleen®

12/18/00

J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093

Dear Customer,

Safety-Kleen (Lone and Grassy Mountain), Inc. (Grassy Mountain Facility) is pleased to provide you with pricing for the management of the following waste stream:

Generator: **NORTH LILY MINING COMPANY** EPA ID #: UTP000001026
Acceptance #: **GM00-0627** Waste Name: HYDROCHLORIC ACID AND WATER

Bill Description	Price	UM
55 G DM TREATMENT	84.000	DM
55 G DM DISPOSAL	56.000	DM
STATE NON-RCRA FEE	2.500	T

The waste acceptance number **GM00-0627** should be included on all correspondence, manifests, and waste labels of any containers that are sent to the Grassy Mountain Facility.

The price quote is based on the waste stream profile information and waste sample composition submitted by your company for this waste. Should any shipments of waste be non-conforming to the profile description or sample analysis, this may result in the waste becoming unacceptable for management by our facility. The Grassy Mountain Facility will notify you of any non-conformance as well as potential alternate management methods and charges that may be applicable should this problem arise.

To schedule a delivery or pick-up of waste, please contact our Customer Service Group at (800) 243-0783. Should you have questions regarding our management of your waste, please contact your local Technical Sales Representative or the facility Customer Service Group.

Thank you for your consideration of the Grassy Mountain Facility. We appreciate the opportunity to be of service to your company.

Sincerely,

Eva McCroskey
Profile Approvals

P.O. BOX 22750 SALT LAKE CITY, UT 84122 801-323-8900 FAX 801-323-8990

NOTIFICATION OF WASTE ACCEPTANCE

12/18/00

Safety-Kleen, Grassy Mountain Facility

CUSTOMER INFORMATION
EPA ID#: UTP000001026
NORTH LILY MINING COMPANY
3 MILES SOUTH OF EUREKA HIGHWAY 6
EUREKA, UT 84628-
CONTACT: SCOTT PAGE
PHONE: (801) 943-4144

INVOICE INFORMATION
REF #: 504832
J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093
CONTACT:
PHONE: (801) 943-4144

PROFILE SHEET #: 8000685
WASTE NAME: HYDROCHLORIC ACID AND WATER

WASTE ACCEPTANCE #: GM00-0627

Thank you for selecting Safety-Kleen, Grassy Mountain for your waste management requirements. Your waste stream has been reviewed and is acceptable for management at our facility based on the information provided on the profile sheet number listed above and conditions listed below. Our facility has the necessary permits to allow the storage, treatment, or disposal of this waste. The above referenced acceptance number should be listed on all shipping documents and correspondence. Please retain these documents for your records and future reference.

Please contact Customer Service at 1-800-243-0783 should you have any questions. To schedule a shipment, contact Grassy Mountain Customer Service at 1-800-243-0783.

ACCEPTANCE INFORMATION

The waste stream identified by the reference number above is acceptable for disposal with the following treatment:

Stabilization

This waste is acceptable for delivery beginning on 12/18/00 thru 12/18/01, at which time an update review may be required for continued acceptability.

Comments:
ON SITE TSD/ RCRA CELL/ NON-RCRA CERTIFICATION ON FILE/ FINGERPRINT ON ARRIVAL

Shipping Requirements:
Acceptance number(GM00-0627) must be marked on top of drum(s).

Type of Container: DRUM

P.O. BOX 22750 SALT LAKE CITY, UT 84122 801-323-8900 FAX 801-323-8990

12/18/00

PROFILE SHEET #: 8000685 WASTE STREAM #: GM00-0627

WASTE STREAM ANALYSIS INFORMATION

Waste Name.....: HYDROCHLORIC ACID AND WATER
Physical State.....: LIQUID
Process Producing Waste..: TANK WASHING

EPA Waste Codes:
NONE

NS - NO SAMPLE

This analysis is solely for use by Safety-Kleen Grassy Mountain employees for the purpose of determining waste acceptability. No other claims are made or implied.

AUTHORIZATION

Approval: Eva McCroskey Date: 12/18/00

Approval: Brett Bushnell BSD Date: 3/2/01

Waste Stream #: GM00-0627

safety-kleen

02/16/01

J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093

Dear Customer,

Safety-Kleen (Lone and Grassy Mountain), Inc. (Grassy Mountain Facility) is pleased to provide you with pricing for the management of the following waste stream:

Generator: **NORTH LILY MINING COMPANY** EPA ID #: UTP000001026
Acceptance #: **GM01-0005** Waste Name: LABPACK

Bill Description	Price	UM
5 G LABPACK TREATMENT & DISP	120.000	DM
55 G LABPACK TREATMENT & DISP	400.000	DM
LP INCINERATION-180 LB MIN	1.960	P
LP REACTIVE INCIN- 25 LB MIN	1.960	P

The waste acceptance number **GM01-0005** should be included on all correspondence, manifests, and waste labels of any containers that are sent to the Grassy Mountain Facility.

The price quote is based on the waste stream profile information and waste sample composition submitted by your company for this waste. Should any shipments of waste be non-conforming to the profile description or sample analysis, this may result in the waste becoming unacceptable for management by our facility. The Grassy Mountain Facility will notify you of any non-conformance as well as potential alternate management methods and charges that may be applicable should this problem arise.

To schedule a delivery or pick-up of waste, please contact our Customer Service Group at (800) 243-0783. Should you have questions regarding our management of your waste, please contact your local Technical Sales Representative or the facility Customer Service Group.

Thank you for your consideration of the Grassy Mountain Facility. We appreciate the opportunity to be of service to your company.

Sincerely,

Eva McCroskey
Profile Approvals

SAFETY-KLEEN (GRASSY MOUNTAIN), INC.
PO BOX 22750 SALT LAKE CITY, UT 84122 801-323-8900 FAX-801-323-8990

NOTIFICATION OF WASTE ACCEPTANCE

02/16/01

Safety-Kleen, Grassy Mountain Facility

CUSTOMER INFORMATION
EPA ID#: UTP000001026
NORTH LILY MINING COMPANY
3 MILES SOUTH OF EUREKA HIGHWAY 6
EUREKA, UT 84628-
CONTACT: SCOTT PAGE
PHONE: (801) 943-4144

INVOICE INFORMATION
REF #: 504832
J B R CONSULTANTS GROUP
8160 S HIGHLAND DR SUITE A4
SANDY, UT 84093
CONTACT:
PHONE: (801) 943-4144

PROFILE SHEET #: M010005
WASTE NAME: LABPACK

WASTE ACCEPTANCE #: GM01-0005

Thank you for selecting Safety-Kleen, Grassy Mountain for your waste management requirements. Your waste stream has been reviewed and is acceptable for management at our facility based on the information provided on the profile sheet number listed above and conditions listed below. Our facility has the necessary permits to allow the storage, treatment, or disposal of this waste. The above referenced acceptance number should be listed on all shipping documents and correspondence. Please retain these documents for your records and future reference.

Please contact Customer Service at 1-800-243-0783 should you have any questions. To schedule a shipment, contact Grassy Mountain Customer Service at 1-800-243-0783.

ACCEPTANCE INFORMATION

The waste stream identified by the reference number above is acceptable for disposal with the following treatment:

Other

This waste is acceptable for delivery beginning on 02/16/01 thru 02/16/02, at which time an update review may be required for continued acceptability.

Comments:
MUST COMPLY WITH GRASSY MOUNTAIN LABPACK GUIDELINES/ REQUIRES INVENTORY APPROVAL PRIOR TO SHIPMENT

Shipping Requirements:
Acceptance number(GM01-0005) must be marked on top of drum(s).
A Notification is required with each shipment in accordance with 40 CFR Section 268.7

Type of Container: DRUM

02/16/01

PROFILE SHEET #: M010005 WASTE STREAM #: GM01-0005

WASTE STREAM ANALYSIS INFORMATION

Waste Name.....: LABPACK
Physical State.....:
Process Producing Waste..: SURPLUS CHEMICALS

EPA Waste Codes:
D001 D002 D003 D008 D011 P106 U144

NS - NO SAMPLE

This analysis is solely for use by Safety-Kleen Grassy Mountain employees for the purpose of determining waste acceptability. No other claims are made or implied.

AUTHORIZATION

Approval: Eva McCroskey Date: 2/16/01

Approval: Brett Bushnell BSB Date: 03/05/01

Waste Stream #: GM01-0005

323-8100

Profile # 8000690 oil/water

c/s. Curtis Williams

SK REFERENCE NO: _____

MATERIAL PROFILE

Safety-Kleen (SK) Use Only	If applicable, Intercompany Billing Facility #	Customer Number:	SK Line Of Business #:	Facility Profile #:

A. GENERATOR INFORMATION

☐ Check if Billing Information is same as Generator Information

Generator Name: North Lily Mining Company

Facility Address (No P.O. Box): 3 Miles South of Eureka on US Highway 6

City/State/Zip: Eureka, Utah

Technical Contact: Scott Page

Phone: (801) 943-4144 Fax: (801) 942-1852

Billing Company: JBR Environmental Consultants

Billing Address: 8160 South Highland Drive

City/State/Zip: Sandy, UT 84093

Billing Contact: Susan Kolan

Phone: (801) 943-4144 Fax: (801) 942-1852

Generator Location (If different from Facility Address): 1800 Glenarm Place, Suite 210, Denver, CO 80202

SIC Code: _____ ☐ CESQG ☐ SQG US EPA ID #: UTP000001026 State Generating ID #: _____

B. SHIPPING INFORMATION

☐ DOT Assistance Requested ☐ Check if SK Transportation Services are requested

US DOT Proper Shipping Name: Used oil

Hazard Class / Division #: N/A ID # (UN / NA): N/A Packing Group (PG): N/A RQ: N/A

Non-Bulk Shipping Containers

Size	Steel	Poly	Fiber	Quantity & Frequency
55 Gal	☒	☐	☐	Approx 8 one time only
____ Gal	☐	☐	☐	
____ Gal	☐	☐	☐	
____ Gal	☐	☐	☐	

Bulk Shipping Containers

Container Type	Quantity, Size & Frequency
☐ Yd³ Box or ☐ Super Sack	
☐ Hard Top or ☐ Tarped Bin	
☐ End Dump (Tarped) Trailer	
☐ Tank or ☐ Vacuum Trailer	

C. GENERAL MATERIAL & REGULATORY INFORMATION

Name of Material: Used oil

Process Generating The Material: Vehicle maintenance

Odor: ☐ None ☒ Mild ☐ Strong; Describe: petroleum

Yes	No		Yes	No	
☐	☒	Regulated or Licensed Radioactive Waste	☐	☒	Meets LDR Standards or ☐ Partially Meets (Landfill Only)
☐	☒	Regulated Medical / Infectious Waste	☐	☒	Commingled Waste (2 or more hazardous wastes mixed as one)
☐	☒	Regulated Benzene NESHAP Waste	☐	☒	Sorbent Added; If Yes, is sorbent biodegradable? ☐ Yes ☐ No
☐	☒	TSCA Regulated PCB Waste (List any PCB level in Sec.D)	☐	☒	Exempt Waste; If Yes, list reference, 40 CFR _____
☐	☒	Regulated Subpart CC Waste (VOs ≥ 500 ppm)	☐	☒	State Hazardous Waste; State Code _____
☐	☒	Regulated Ozone Depleting Substance	☐	☒	EPA Hazardous Waste
☐	☒	CERCLA Regulated (Superfund) Waste			EPA Waste Codes (including any LDR subcategories, e.g., D003 Water Reactive):
☐	☒	Hazardous Debris (Subject to alternative LDR treatment standards)			
☐	☒	Waste Contains UHCs/Constituents Of Concern			
		If Yes, list in ☐ Sec. D or ☐ Constituent Addendum			

EPA Haz Waste Only Origin Code: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Source Code: A _____ Form Code: B _____ System Code: M _____

D. MATERIAL COMPOSITION

1. Chemical/Physical Constituents: List all detectable components by chemical name, including physical material, e.g., sorbent, debris.

Material Components & Composition	ppm	☐ wt % ☒ vol %	Material Components & Composition	ppm	☐ wt % ☐ vol %
Used motor oil		60-80			
Water		30-40			

Section. D continues on the next page for Elemental Constituents ☞

Range Total ≥ 100 %

SAFETY-KLEEN MATERIAL PROFILE (continued):

SK REFERENCE NO: _____

Note: Completion of Sections D.2 & F is optional for: ☐ Analytical Profile (representative sample submitted; test results used to complete D.2 & F)

Completion of Sections D.2, E, & F is optional for: ☐ Standard Industry Profile (Safety-Kleen historical data utilized to complete D.2, E, & F)

D. MATERIAL COMPOSITION *(Continued)*

2. Elemental Constituents ☐ *Check if this waste contains No Detectable Elements / Metals, unless listed below.*

Check either: ☐ Total Analysis *or* ☐ TCLP Method *or* ☐ Generator Knowledge, then enter data below.

Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm
Aluminum		Cadmium	<0.5	Fluorine		Nickel		Sodium	
Antimony		Chlorine		Lead	>0.02	Phosphorous		Sulfur	
Arsenic	<0.2	Chromium	<0.02	Lithium		Potassium		Thalljum	
Barium	0.2	Cobalt		Manganese		Selenium	<0.1	Titanium	
Beryllium		Copper		Mercury	<0.0002	Silicon		Vanadium	
Bromine		Iodine		Molybdenum		Silver	<0.01	Zinc	

E. REACTIVE CHARACTERISTICS

☐ *Check if this waste exhibits No Reactive Characteristics*

Yes	No		Yes	No		Yes	No		
☐	☒	Explosive	☐	☒	Oxidizer	☐	☒	Reactive Cyanide	ppm
☐	☒	Shock Sensitive	☐	☒	Water Reactive	☐	☒	Reactive Sulfide	ppm
☐	☒	Pyrophoric	☐	☒	Air Reactive	☐	☒	Polymerizable	

Other Incompatibles; Describe _____

F. MATERIAL PHYSICAL CHARACTERISTICS @ 70°F.

# of Phases	2	Color	black	Flash Point	°F (if < 73°F)
Liquid %	>95	Specific Gravity	N/A	☐ 73 - <100°F ☐ 100 - 141°F	
Sludge %	≤5	Viscosity cps	N/A	☒ 142°F. - <200°F ☐ ≥200°F	
Solid %		Density	N/A	Boiling Point (if < 130°F)	
Powder %		☐ lbs./ gal. ☐ lbs./ cu. ft.		Ash % (Bridgeport Only)	
Gas %		Comments			

pH ☐ Liquids >20% H_2O *or* pH ☐ Non-Aqueous

☐ ≤ 2 pH ☐ > 2 - 4 pH ☒ > 4 - 10 pH

☐ > 10 - < 12.5 pH ☐ ≥ 12.5 pH

BTU's / lb. or Range _____

G. GENERATOR PROFILE CERTIFICATION

I hereby certify that I am an authorized agent of the generator, and warrant on behalf of the generator that the information supplied on this form and on any attachments or supplements hereto is complete and accurate, and that all known or suspected hazards of the material(s) described herein have been disclosed. I agree that if the sample test results indicate a discrepancy with any information supplied on this form, that either Safety-Kleen or the generator may initiate further testing and evaluation in accordance with the terms and conditions of the contract between Safety-Kleen and the generator and that this profile certification may be amended accordingly.

S. Page - as agent for D. Colby — Scott Page - Analyst — 12 / 1 / 00

Generator's Authorized Signature — Name & Title (Printed or Typed) — Date

Comments _____

SK Use Only ☐ SKOS ☐ SKVS ☐ Non-haz Evaluation ☐ Standard Industry Profile: SIP Index # _____

SK Sales Rep. Name _____ Employee # _____ Territory/Branch # _____

Process Approval # _____ Product Code or Part # _____ TRI Flowpath # _____ Pricing _____

Waste Approval & Certification

We certify acceptability of this waste stream and that all appropriate permits have been obtained, as indicated by Safety-Kleen's facility approval below:

_____ _____ ____ / ____ / ____

Safety-Kleen's Authorized Facility Signature — Name & Title (Printed or Typed) — Date

Left turn to Silver City No servis. Pre-mix

SK REFERENCE NO: GM00-0626

750yds right turn

55+2.50 = 57.50

MATERIAL PROFILE

Safety-Kleen (SK) Use Only	If applicable, Intercompany Billing Facility #	Customer Number:	SK Line Of Business #:	Facility Profile #:

A. GENERATOR INFORMATION ☐ *Check if Billing Information is same as Generator Information*

Generator Name: North Lily Mining Company
Facility Address (No P.O. Box): 3 Miles South of Eureka on US Highway 6
City/State/Zip: Eureka, Utah
Technical Contact: Scott Page
Phone: (801) 943-4144 Fax: (801) 942-1852
Generator Location *(If different from Facility Address)*: 1800 Glenarm Place, Suite 210, Denver, CO 80202
SIC Code: ____ ☐ CESQG ☐ SQG US EPA ID #: UTP000001026 State Generating ID #: ____

Billing Company: JBR Environmental Consultants
Billing Address: 8160 South Highland Drive
City/State/Zip: Sandy, UT 84093
Billing Contact: Susan Kolan
Phone: (801) 943-4144 Fax: (801) 942-1852

B. SHIPPING INFORMATION ☐ *DOT Assistance Requested* ☐ *Check if SK Transportation Services are requested*

US DOT Proper Shipping Name: Non-hazardous solid waste
Hazard Class / Division #: N/A ID # (UN / NA): N/A Packing Group (PG): N/A RQ: N/A

Non-Bulk Shipping Containers

Size	Steel	Poly	Fiber	Quantity & Frequency
55 Gal	☒	☐	☐	1 - one time only
____ Gal	☐	☐	☐	
____ Gal	☐	☐	☐	
____ Gal	☐	☐	☐	

Bulk Shipping Containers

Container Type	Quantity, Size & Frequency
☐ Yd³ Box *or* ☐ Super Sack	
☐ Hard Top *or* ☐ Tarped Bin	
☐ End Dump (Tarped) Trailer	
☐ Tank *or* ☐ Vacuum Trailer	

C. GENERAL MATERIAL & REGULATORY INFORMATION

Name of Material: Premix
Process Generating The Material: Unused surplus chemical mix
Odor: ☐ None ☐ Mild ☐ Strong; Describe ____

Yes	No	
☐	☒	Regulated or Licensed Radioactive Waste
☐	☒	Regulated Medical / Infectious Waste
☐	☒	Regulated Benzene NESHAP Waste
☐	☒	TSCA Regulated PCB Waste *(List any PCB level in Sec.D)*
☐	☒	Regulated Subpart CC Waste (VOs ≥ 500 ppm)
☐	☒	Regulated Ozone Depleting Substance
☐	☒	CERCLA Regulated (Superfund) Waste
☐	☒	Hazardous Debris (Subject to alternative LDR treatment standards)
☐	☒	Waste Contains UHCs/Constituents Of Concern

If Yes, list in ☐ Sec. D *or* ☐ Constituent Addendum

Yes	No	
☒	☐	Meets LDR Standards or ☐ Partially Meets (Landfill Only)
☐	☒	Commingled Waste (2 or more hazardous wastes mixed as one)
☐	☒	Sorbent Added; If Yes, is sorbent biodegradable? ☐ Yes ☐ No
☐	☒	Exempt Waste; If Yes, list reference, 40 CFR ____
☐	☒	State Hazardous Waste; State Code ____
☐	☒	EPA Hazardous Waste

EPA Waste Codes (including any LDR subcategories, e.g., D003 Water Reactive):
None - non-hazardous

EPA Haz Waste Only Origin Code: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Source Code: A ____ Form Code: B ____ System Code: M ____

D. MATERIAL COMPOSITION

1. **Chemical/Physical Constituents:** List all detectable components by chemical name, including physical material, e.g., sorbent, debris.

Material Components & Composition	ppm	☒ wt % ☐ vol %	Material Components & Composition	ppm	☐ wt % ☐ vol %
Borax pentahydrate		30	(sodium tetra borate - CAS	1330-43-4)	
Sodium nitrate		15			
Soda ash		15			
silica sand		40			

Section D continues on the next page for Elemental Constituents or Range Total ≥ 100 %

SAFETY-KLEEN MATERIAL PROFILE (continued):

SK REFERENCE NO: _____

Note: Completion of Sections D.2 & F is optional for: ☐ Analytical Profile (representative sample submitted; test results used to complete D.2 & F)

Completion of Sections D.2, E, & F is optional for: ☐ Standard Industry Profile (Safety-Kleen historical data utilized to complete D.2, E, & F)

D. MATERIAL COMPOSITION *(Continued)*

2. Elemental Constituents ☒ *Check if this waste contains No Detectable Elements / Metals, unless listed below.*

Check either: ☐ Total Analysis *or* ☐ TCLP Method *or* ☒ Generator Knowledge, then enter data below.

Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm
Aluminum	none	Cadmium	none	Fluorine	none	Nickel	none	Sodium	none
Antimony	none	Chlorine	none	Lead	none	Phosphorous	none	Sulfur	none
Arsenic	none	Chromium	none	Lithium	none	Potassium	none	Thallium	none
Barium	none	Cobalt	none	Manganese	none	Selenium	none	Titanium	none
Beryllium	none	Copper	none	Mercury	none	Silicon	none	Vanadium	none
Bromine	none	Iodine	none	Molybdenum	none	Silver	none	Zinc	none

E. REACTIVE CHARACTERISTICS

☐ *Check if this waste exhibits No Reactive Characteristics*

Yes	No		Yes	No		Yes	No		
☐	☒	Explosive	☐	☒	Oxidizer	☐	☒	Reactive Cyanide	_____ ppm
☐	☒	Shock Sensitive	☐	☒	Water Reactive	☐	☒	Reactive Sulfide	_____ ppm
☐	☒	Pyrophoric	☐	☒	Air Reactive	☐	☒	Polymerizable	

Other Incompatibles; Describe _____

F. MATERIAL PHYSICAL CHARACTERISTICS @ 70°F.

# of Phases	1	Color	white	Flash Point	_____ °F (if < 73°F)
Liquid %	0	Specific Gravity	N/A	☐ 73 - <100°F ☐ 100 - 141°F	
Sludge %	0	Viscosity cps	N/A	☐ 142°F. - <200°F ☒ ≥200°F	
Solid %	100	Density	N/A	Boiling Point (if < 130°F)	N/A
Powder %	0	☐ lbs./ gal. ☐ lbs./ cu. ft.		Ash % (Bridgeport Only)	N/A
Gas %	0	Comments			

pH ☐ Liquids >20% H_2O *or* pH ☒ Non-Aqueous

☐ ≤ 2 pH ☐ > 2 - 4 pH ☐ > 4 - 10 pH

☐ > 10 - < 12.5 pH ☐ ≥ 12.5 pH

BTU's / lb. or Range N/A

G. GENERATOR PROFILE CERTIFICATION

I hereby certify that I am an authorized agent of the generator, and warrant on behalf of the generator that the information supplied on this form and on any attachments or supplements hereto is complete and accurate, and that all known or suspected hazards of the material(s) described herein have been disclosed. I agree that if the sample test results indicate a discrepancy with any information supplied on this form, that either Safety-Kleen or the generator may initiate further testing and evaluation in accordance with the terms and conditions of the contract between Safety-Kleen and the generator and that this profile certification may be amended accordingly.

S. Page - H/S agent for N. Lilly — Scott Page - Analyst — 12/27/00

Generator's Authorized Signature — Name & Title (Printed or Typed) — Date

Comments non-hazardous material

SK Use Only ☐ SKOS ☐ SKVS ☐ Non-haz Evaluation ☐ Standard Industry Profile: SIP Index # _____

SK Sales Rep. Name _____ Employee # _____ Territory/Branch # _____

Process Approval # _____ Product Code or Part # _____ TRI Flowpath # _____ Pricing _____

Waste Approval & Certification

We certify acceptability of this waste stream and that all appropriate permits have been obtained, as indicated by Safety-Kleen's facility approval below:

_____ _____ ____ / ____ / ____

Safety-Kleen's Authorized Facility Signature — Name & Title (Printed or Typed) — Date

Rubber liner

SK REFERENCE NO: GM-01-0004 ?

$51+78+2.50 = 132.50

MATERIAL PROFILE

Safety-Kleen (SK) Use Only	If applicable, Intercompany Billing Facility #	Customer Number:	SK Line Of Business #:	Facility Profile #:

A. GENERATOR INFORMATION ☐ *Check if Billing Information is same as Generator Information*

Generator Name: North Lily Mining Company
Billing Company: JBR Environmental Consultants
Facility Address (No P.O. Box): 3 Miles South of Eureka on US Highway 6
Billing Address: 8160 South Highland Drive
City/State/Zip: Eureka, Utah
City/State/Zip: Sandy, UT 84093
Technical Contact: Scott Page
Billing Contact: Susan Kolan
Phone: (801) 943-4144 Fax:
Phone: (801) 943-4144 Fax: (801) 942-1852
Generator Location *(If different from Facility Address)*: 1800 Glenarm Place, Suite 210, Denver, CO 80202
SIC Code: ☐ CESQG ☐ SQG US EPA ID #: UTP000001026 State Generating ID #:

B. SHIPPING INFORMATION ☐ *DOT Assistance Requested* ☐ *Check if SK Transportation Services are requested*

US DOT Proper Shipping Name: Non-hazardous solid waste (rubber covered with oil)
Hazard Class / Division #: ID # (UN / NA): Packing Group (PG): RQ:

Non-Bulk Shipping Containers

Size	Steel	Poly	Fiber	Quantity & Frequency
55 Gal	☒	☐	☐	2 - one time only
Gal	☐	☐	☐	
Gal	☐	☐	☐	
Gal	☐	☐	☐	

Bulk Shipping Containers

Container Type	Quantity, Size & Frequency
☐ Yd³ Box *or* ☐ Super Sack	
☐ Hard Top *or* ☐ Tarped Bin	
☐ End Dump (Tarped) Trailer	
☐ Tank *or* ☐ Vacuum Trailer	

C. GENERAL MATERIAL & REGULATORY INFORMATION

Name of Material: Rubber containment liner contaminated with oil
Process Generating The Material: facility cleanup
Odor: ☒ None ☐ Mild ☐ Strong; Describe

Yes	No		Yes	No	
☐	☒	Regulated or Licensed Radioactive Waste	☒	☐	Meets LDR Standards or ☐ Partially Meets (Landfill Only)
☐	☒	Regulated Medical / Infectious Waste	☐	☒	Commingled Waste (2 or more hazardous wastes mixed as one)
☐	☒	Regulated Benzene NESHAP Waste	☐	☒	Sorbent Added; If Yes, is sorbent biodegradable? ☐ Yes ☐ No
☐	☒	TSCA Regulated PCB Waste *(List any PCB level in Sec.D)*	☐	☒	Exempt Waste; If Yes, list reference, 40 CFR
☐	☒	Regulated Subpart CC Waste (VOs ≥ 500 ppm)	☐	☒	State Hazardous Waste; State Code
☐	☒	Regulated Ozone Depleting Substance	☐	☐	EPA Hazardous Waste
☐	☒	CERCLA Regulated (Superfund) Waste			
☐	☒	Hazardous Debris (Subject to alternative LDR treatment standards)			
☐	☒	Waste Contains UHCs/Constituents Of Concern			

If Yes, list in ☐ Sec. D *or* ☐ Constituent Addendum

EPA Waste Codes (including any LDR subcategories, e.g., D003 Water Reactive): None

EPA Haz Waste Only Origin Code: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Source Code: A Form Code: B System Code: M

D. MATERIAL COMPOSITION

1. **Chemical/Physical Constituents:** List all detectable components by chemical name, including physical material, e.g., sorbent, debris.

Material Components & Composition	ppm	☐ wt % ☐ vol %	Material Components & Composition	ppm	☐ wt % ☐ vol %
rubber		97			
oil		1			
water		2			

Section D continues on the next page for Elemental Constituents Range Total ≥ 100 %

SAFETY-KLEEN MATERIAL PROFILE (continued):

SK REFERENCE NO: _____

Note: Completion of Sections D.2 & F is optional for: ☐ Analytical Profile (representative sample submitted; test results used to complete D.2 & F)

Completion of Sections D.2, E, & F is optional for: ☐ Standard Industry Profile (Safety-Kleen historical data utilized to complete D.2, E, & F)

D. MATERIAL COMPOSITION *(Continued)*

2. Elemental Constituents ☒ *Check if this waste contains No Detectable Elements / Metals, unless listed below.*

Check either; ☐ Total Analysis *or* ☐ TCLP Method *or* ☒ Generator Knowledge, then enter data below.

Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm
Aluminum		Cadmium		Fluorine		Nickel		Sodium	
Antimony		Chlorine		Lead		Phosphorous		Sulfur	
Arsenic		Chromium		Lithium		Potassium		Thallium	
Barium		Cobalt		Manganese		Selenium		Titanium	
Beryllium		Copper		Mercury		Silicon		Vanadium	
Bromine		Iodine		Molybdenum		Silver		Zinc	

E. REACTIVE CHARACTERISTICS

☐ *Check if this waste exhibits No Reactive Characteristics*

Yes	No		Yes	No		Yes	No		
☐	☐	Explosive	☐	☐	Oxidizer	☐	☐	Reactive Cyanide _____	ppm
☐	☐	Shock Sensitive	☐	☐	Water Reactive	☐	☐	Reactive Sulfide _____	ppm
☐	☐	Pyrophoric	☐	☐	Air Reactive	☐	☐	Polymerizable	

Other Incompatibles; Describe _____

F. MATERIAL PHYSICAL CHARACTERISTICS @ 70 °F.

# of Phases	2	Color	black	Flash Point _____ °F (if < 73 °F)	pH ☐ Liquids >20% H_2O *or* pH ☒ Non-Aqueous
Liquid %	3	Specific Gravity	NA	☐ 73 - <100 °F ☐ 100 - 141 °F	☐ ≤ 2 pH ☐ > 2 - 4 pH ☐ > 4 - 10 pH
Sludge %	--	Viscosity cps	NA	☐ 142 °F. - <200 °F ☒ ≥200 °F	☐ > 10 - < 12.5 pH ☐ ≥ 12.5 pH
Solid %	97	Density	NA	Boiling Point (if < 130 °F) NA	BTU's / lb. or Range _____
Powder %		☐ lbs./ gal. ☐ lbs./ cu. ft.		Ash % (Bridgeport Only) NA	
Gas %		Comments			

G. GENERATOR PROFILE CERTIFICATION

I hereby certify that I am an authorized agent of the generator, and warrant on behalf of the generator that the information supplied on this form and on any attachments or supplements hereto is complete and accurate, and that all known or suspected hazards of the material(s) described herein have been disclosed. I agree that if the sample test results indicate a discrepancy with any information supplied on this form, that either Safety-Kleen or the generator may initiate further testing and evaluation in accordance with the terms and conditions of the contract between Safety-Kleen and the generator and that this profile certification may be amended accordingly.

S. Page - as agent for N. Gly — Generator's Authorized Signature

Scott Page - Analyst — Name & Title (Printed or Typed)

12 / 27 / 00 — Date

Comments _____

SK Use Only ☐ SKOS ☐ SKVS ☐ Non-haz Evaluation ☐ Standard Industry Profile: SIP Index # _____

SK Sales Rep. Name _____ Employee # _____ Territory/Branch # _____

Process Approval # _____ Product Code or Part # _____ TRI Flowpath # _____ Pricing _____

Waste Approval & Certification

We certify acceptability of this waste stream and that all appropriate permits have been obtained, as indicated by Safety-Kleen's facility approval below:

_____ / _____ / _____

Safety-Kleen's Authorized Facility Signature — Name & Title (Printed or Typed) — Date

Acid/water

SK REFERENCE NO: GM 00-0627

84+56+2.50 = 142.50

MATERIAL PROFILE

Safety-Kleen (SK) Use Only	If applicable, Intercompany Billing Facility #	Customer Number:	SK Line Of Business #:	Facility Profile #:

A. GENERATOR INFORMATION ☐ *Check if Billing Information is same as Generator Information*

Generator Name: North Lily Mining Company
Billing Company: JBR Environmental Consultants
Facility Address (No P.O. Box): 3 Miles South of Eureka on US Highway 6
Billing Address: 8160 South Highland Drive
City/State/Zip: Eureka, Utah
City/State/Zip: Sandy, UT 84093
Technical Contact: Scott Page
Billing Contact: Susan Kolan
Phone: (801) 943-4144 Fax: (801) 942-1852
Phone: (801) 943-4144 Fax: (801) 942-1852
Generator Location *(If different from Facility Address)*: 1800 Glenarm Place, Suite 210, Denver, CO 80202
SIC Code: ____ ☐ CESQG ☐ SQG US EPA ID #: UTP000001026 State Generating ID #: ____

B. SHIPPING INFORMATION ☐ *DOT Assistance Requested* ☐ *Check if SK Transportation Services are requested*

US DOT Proper Shipping Name: Waste corrosive liquid, n.o.s., (hydrochloric acid & water)
Hazard Class / Division #: 8 ID # (UN / NA): UN1760 Packing Group (PG): II RQ: 5,000

Non-Bulk Shipping Containers

Size	Steel	Poly	Fiber	Quantity & Frequency
55 Gal	☐	☒	☐	2-one time only
____ Gal	☐	☐	☐	
____ Gal	☐	☐	☐	
____ Gal	☐	☐	☐	

Bulk Shipping Containers

Container Type	Quantity, Size & Frequency
☐ Yd³ Box *or* ☐ Super Sack	
☐ Hard Top *or* ☐ Tarped Bin	
☐ End Dump (Tarped) Trailer	
☐ Tank *or* ☐ Vacuum Trailer	

C. GENERAL MATERIAL & REGULATORY INFORMATION

Name of Material: Hydrochloric acid and water
Process Generating The Material: Tank washing
Odor: ☐ None ☐ Mild ☒ Strong; Describe: acid

Yes	No		Yes	No	
☐	☒	Regulated or Licensed Radioactive Waste	☒	☐	Meets LDR Standards or ☐ Partially Meets (Landfill Only)
☐	☒	Regulated Medical / Infectious Waste	☐	☒	Commingled Waste (2 or more hazardous wastes mixed as one)
☐	☒	Regulated Benzene NESHAP Waste	☐	☒	Sorbent Added; If Yes, is sorbent biodegradable? ☐ Yes ☐ No
☐	☒	TSCA Regulated PCB Waste *(List any PCB level in Sec.D)*	☐	☒	Exempt Waste; If Yes, list reference, 40 CFR ____
☐	☒	Regulated Subpart CC Waste (VOs ≥ 500 ppm)	☐	☒	State Hazardous Waste; State Code ____
☐	☒	Regulated Ozone Depleting Substance	☒	☐	EPA Hazardous Waste
☐	☒	CERCLA Regulated (Superfund) Waste			
☐	☒	Hazardous Debris (Subject to alternative LDR treatment standards)			
☐	☒	Waste Contains UHCs/Constituents Of Concern			

EPA Waste Codes (including any LDR subcategories, e.g., D003 Water Reactive): D002

If Yes, list in ☐ Sec. D *or* ☐ Constituent Addendum

EPA Haz Waste Only Origin Code: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Source Code: A ____ Form Code: B ____ System Code: M ____

D. MATERIAL COMPOSITION

1. **Chemical/Physical Constituents:** List all detectable components by chemical name, including physical material, e.g., sorbent, debris.

Material Components & Composition	ppm	☐ wt % ☒ vol %	Material Components & Composition	ppm	☐ wt % ☐ vol %
Hydrochloric acid		5-10			
Water		90-95			

Section D continues on the next page for Elemental Constituents ☞

Range Total ≥ 100 %

SAFETY-KLEEN MATERIAL PROFILE (continued):

SK REFERENCE NO: _____

Note: Completion of Sections D.2 & F is optional for: ☐ Analytical Profile (representative sample submitted; test results used to complete D.2 & F)

Completion of Sections D.2, E, & F is optional for: ☐ Standard Industry Profile (Safety-Kleen historical data utilized to complete D.2, E, & F)

D. MATERIAL COMPOSITION *(Continued)*

2. Elemental Constituents ☒ *Check if this waste contains No Detectable Elements / Metals, unless listed below.*

Check either: ☐ Total Analysis *or* ☐ TCLP Method *or* ☒ Generator Knowledge, then enter data below.

Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm
Aluminum		Cadmium		Fluorine		Nickel		Sodium	
Antimony		Chlorine		Lead		Phosphorous		Sulfur	
Arsenic		Chromium		Lithium		Potassium		Thallium	
Barium		Cobalt		Manganese		Selenium		Titanium	
Beryllium		Copper		Mercury		Silicon		Vanadium	
Bromine		Iodine		Molybdenum		Silver		Zinc	

E. REACTIVE CHARACTERISTICS

☐ *Check if this waste exhibits No Reactive Characteristics*

Yes	No		Yes	No		Yes	No	
☐	☒	Explosive	☐	☒	Oxidizer	☐	☒	Reactive Cyanide _____ ppm
☐	☒	Shock Sensitive	☐	☒	Water Reactive	☐	☒	Reactive Sulfide _____ ppm
☐	☒	Pyrophoric	☐	☒	Air Reactive	☐	☒	Polymerizable

Other Incompatibles; Describe _____

F. MATERIAL PHYSICAL CHARACTERISTICS @ 70°F.

# of Phases	1	Color	grey	Flash Point _____ °F (if < 73°F)
Liquid %	100	Specific Gravity	N/A	☐ 73 - <100°F ☐ 100 - 141°F
Sludge %	--	Viscosity cps	N/A	☐ 142°F. - <200°F ☒ ≥200°F
Solid %		Density	N/A	Boiling Point (if < 130°F) N/A
Powder %		☐ lbs./ gal. ☐ lbs./ cu. ft.		Ash % (Bridgeport Only) N/A
Gas %		Comments		

pH ☐ Liquids >20% H_2O *or* pH ☐ Non-Aqueous

☒ ≤ 2 pH ☒ > 2 - 4 pH ☐ > 4 - 10 pH

☐ > 10 - < 12.5 pH ☐ ≥ 12.5 pH

BTU's / lb. or Range _____

G. GENERATOR PROFILE CERTIFICATION

I hereby certify that I am an authorized agent of the generator, and warrant on behalf of the generator that the information supplied on this form and on any attachments or supplements hereto is complete and accurate, and that all known or suspected hazards of the material(s) described herein have been disclosed. I agree that if the sample test results indicate a discrepancy with any information supplied on this form, that either Safety-Kleen or the generator may initiate further testing and evaluation in accordance with the terms and conditions of the contract between Safety-Kleen and the generator and that this profile certification may be amended accordingly.

S Page on agent for N. Lilly — Scott Page - Analyst — 12/1/00

Generator's Authorized Signature — Name & Title (Printed or Typed) — Date

Comments _____

SK Use Only ☐ SKOS ☐ SKVS ☐ Non-haz Evaluation ☐ Standard Industry Profile: SIP Index # _____

SK Sales Rep. Name _____ Employee # _____ Territory/Branch # _____

Process Approval # _____ Product Code or Part # _____ TRI Flowpath # _____ Pricing _____

Waste Approval & Certification

We certify acceptability of this waste stream and that all appropriate permits have been obtained, as indicated by Safety-Kleen's facility approval below:

_____ _____ ____ / ____ / ____

Safety-Kleen's Authorized Facility Signature — Name & Title (Printed or Typed) — Date

SK REFERENCE NO: _____

MATERIAL PROFILE

Safety-Kleen (SK) Use Only	If applicable, Intercompany Billing Facility #	Customer Number:	SK Line Of Business #:	Facility Profile #:

A. GENERATOR INFORMATION

☐ *Check if Billing Information is same as Generator Information*

Generator Name: *North Lily Mining Company*
Facility Address (No P.O. Box): *3 miles south of Eureka on U.S. Highway 6*
City/State/Zip: *Eureka, Utah 84628*
Technical Contact: *Steve Ashby*
Phone: *801-943-4144* Fax: *801-942-1852*

Billing Company: *JBR Environmental Consultants*
Billing Address: *8160 South Highland Drive Suite A-4*
City/State/Zip: *Sandy, Utah 84093*
Billing Contact: *Susan Kolan*
Phone: *801-943-4144* Fax: *801-942-1852*

Generator Location *(If different from Facility Address)*: *1800 Glenarm Place, Suite 210, Denver, Colorado 80202*
SIC Code: _____ ☐ CESQG ☐ SQG US EPA ID #: *UTP000001026* State Generating ID #: _____

B. SHIPPING INFORMATION

☐ *DOT Assistance Requested* ☒ *Check if SK Transportation Services are requested*

US DOT Proper Shipping Name: *Waste, Sodium Hydroxide, Solid*
Hazard Class / Division #: *8* ID # (UN / NA): *UN 1823* Packing Group (PG): *II* RQ: *1,000*

Non-Bulk Shipping Containers

Size	Steel	Poly	Fiber	Quantity & Frequency
55 Gal	☐	☒	☐	*6-One time only*
_____ Gal	☐	☐	☐	
_____ Gal	☐	☐	☐	
_____ Gal	☐	☐	☐	

Bulk Shipping Containers

Container Type	Quantity, Size & Frequency
☐ Yd.^{3} Box *or* ☐ Super Sack	
☐ Hard Top *or* ☐ Tarped Bin	
☐ End Dump (Tarped) Trailer	
☐ Tank *or* ☐ Vacuum Trailer	

C. GENERAL MATERIAL & REGULATORY INFORMATION

Name of Material: *Sodium Hydroxide, Solid Chunks/Debris*
Process Generating The Material: *Tank cleanout*
Odor: ☐ None ☒ Mild ☐ Strong; Describe _____

Yes	No		Yes	No	
☐	☒	Regulated or Licensed Radioactive Waste	☒	☐	Meets LDR Standards or ☐ Partially Meets (Landfill Only)
☐	☒	Regulated Medical / Infectious Waste	☐	☒	Commingled Waste (2 or more hazardous wastes mixed as one)
☐	☒	Regulated Benzene NESHAP Waste	☐	☒	Sorbent Added; If Yes, is sorbent biodegradable ☐ Yes ☐ No
☐	☒	TSCA Regulated PCB Waste *(List any PCB level in Sec.D)*	☐	☒	Exempt Waste; If Yes, list reference, 40 CFR _____
☐	☒	Regulated Subpart CC Waste (VOs ≥ 500 ppm)	☐	☒	State Hazardous Waste; State Code _____
☐	☒	Regulated Ozone Depleting Substance	☒	☐	EPA Hazardous Waste
☐	☒	CERCLA Regulated (Superfund) Waste			EPA Waste Codes (including any LDR subcategories, e.g., D003 Water Reactive):
☐	☒	Hazardous Debris (Subject to alternative LDR treatment standards)			*D 010*
☐	☒	Waste Contains UHCs/Constituents Of Concern			
		If Yes, list in ☐ Sec. D *or* ☐ Constituent Addendum			

EPA Haz Waste Only Origin Code: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Source Code: A _____ Form Code: B _____ System Code: M _____

D. MATERIAL COMPOSITION

1. **Chemical/Physical Constituents:** List all detectable components by chemical name, including physical material, e.g., sorbent, debris.

Material Components & Composition	ppm	☐ wt % ☒ vol %	Material Components & Composition	ppm	☐ wt % ☐ vol %
Sodium Hydroxide, Solid Chunks/Debris		*60-70*			
Soils/Rocks		*30-40*			
Selenium	*1.00*				
Arsenic	*2.6*				

Section. D continues on the next page for Elemental Constituents ☛

Range Total ≥ 100 %

SAFETY-KLEEN MATERIAL PROFILE (continued): SK REFERENCE NO: _____

Note: Completion of Sections D.2 & F is optional for: ☐ Analytical Profile (representative sample submitted; test results used to complete D.2 & F)

Completion of Sections D.2, E, & F is optional for: ☐ Standard Industry Profile (Safety-Kleen historical data utilized to complete D.2, E, & F)

D. MATERIAL COMPOSITION *(Continued)*

2. Elemental Constituents ☐ ***Check if this waste contains No Detectable Elements / Metals, unless listed below.***

Check either; ☐ Total Analysis *or* ☒ TCLP Method *or* ☐ Generator Knowledge, then enter data below.

Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm
Aluminum		Cadmium		Fluorine		Nickel		Sodium	
Antimony		Chlorine		Lead		Phosphorous		Sulfur	
Arsenic	2.6	Chromium		Lithium		Potassium		Thallium	
Barium		Cobalt		Manganese		Selenium	1.00	Titanium	
Beryllium		Copper		Mercury		Silicon		Vanadium	
Bromine		Iodine		Molybdenum		Silver		Zinc	

E. REACTIVE CHARACTERISTICS ☐ *Check if this waste exhibits No Reactive Characteristics*

Yes	No		Yes	No		Yes	No		
☐	☒	Explosive	☐	☒	Oxidizer	☐	☒	Reactive Cyanide _____	ppm
☐	☒	Shock Sensitive	☐	☒	Water Reactive	☐	☒	Reactive Sulfide _____	ppm
☐	☒	Pyrophoric	☐	☒	Air Reactive	☐	☒	Polymerizable	

Other Incompatibles; Describe _____

F. MATERIAL PHYSICAL CHARACTERISTICS @ 70°F.

# of Phases: 1	Color: Varies	Flash Point: _____ °F (if < 73°F)	pH ☐ Liquids >20% H_2O *or* pH ☒ Non-Aqueous
Liquid %:	Specific Gravity: N/A	☐ 73 - <100°F ☐ 100 - 141°F	☐ ≤ 2 pH ☐ > 2 - 4 pH ☐ > 4 - 10 pH
Sludge %:	Viscosity cps: N/A	☐ 142°F. - <200°F ☒ ≥200°F	☐ > 10 - < 12.5 pH ☒ ≥ 12.5 pH
Solid %: 100	Density: N/A	Boiling Point (if < 130°F): _____	BTU's / lb. or Range: _____
Powder %:	☐ lbs./ gal. ☐ lbs./ cu. ft.	Ash % (Bridgeport Only): _____	
Gas %:	Comments: _____		

G. GENERATOR PROFILE CERTIFICATION

I hereby certify that I am an authorized agent of the generator, and warrant on behalf of the generator that the information supplied on this form and on any attachments or supplements hereto is complete and accurate, and that all known or suspected hazards of the material(s) described herein have been disclosed. I agree that if the sample test results indicate a discrepancy with any information supplied on this form, that either Safety-Kleen or the generator may initiate further testing and evaluation in accordance with the terms and conditions of the contract between Safety-Kleen and the generator and that this profile certification may be amended accordingly.

S. Ashby AS AGT. FOR N. Lily — Steve Ashby - Analyst — 5 / 24 / 01

Generator's Authorized Signature — Name & Title (Printed or Typed) — Date

Comments *Please complete ASAP & contact Chuck Lawrence when completed.*

Waste stream contains greater than 50% caustic chunks (debris).

$160 per drum, treatment & disposal

$70 per drum transportation

SK Use Only ☐ SKOS ☐ SKVS ☐ Non-haz Evaluation ☐ Standard Industry Profile: SIP Index # _____

SK Sales Rep. Name _____ Employee # _____ Territory/Branch # _____

Process Approval # _____ Product Code or Part # _____ TRI Flowpath # _____ Pricing _____

Waste Approval & Certification

We certify acceptability of this waste stream and that all appropriate permits have been obtained, as indicated by Safety-Kleen's facility approval

_____ _____ ____ / ____ / ____

Safety-Kleen's Authorized Facility Signature — Name & Title (Printed or Typed) — Date

VAN WATERS & ROGERS INC.
MATERIAL SAFETY DATA SHEET

SECTION: C09 SODA ASH

EFFECTIVE DATE: 02/21/91

ORDER NO: 116465
PROD NO : 342640

NORTH LILY MINING CO

EUREKA ,UT 84628

WATERS & ROGERS , SUBSIDIARY OF UNIVAR (408)435-8700
0 NORTON BUILDING , SEATTLE , WA 98104

EMERGENCY ASSISTANCE

EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

FOR PRODUCT AND SALES INFORMATION

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE AT
VW&R SALT LAKE CTY OFFICE 801-328-1112 SALT LAKE CT, UT

PRODUCT IDENTIFICATION

CT NAME: SODA ASH

CAS NO.: 497-19-8

MSDS #: P1120

MON NAMES/SYNONYMS: SODIUM CARBONATE,
YDROUS; SODA ASH DENSE
A ASH LIGHT

MULA: NA2 C03

DATE ISSUED: 02/91

ULAR WEIGHT: 106

SUPERCEDES: 10/90

D RATING (MANUFACTURER)

HMIS RATING

LTH: 2
E: 0
IVITY: 0
CIAL: NONE

HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

HEALTH: 2
FIRE: 0
REACTIVITY: 0

HAZARDOUS INGREDIENTS

COMPONENT	CAS NO.	%	EXPOSURE LIMITS, PPM OSHA PEL	ACGIH TLV	OTHER LIMIT	HAZARD
SODIUM CARBONATE	(497-19-8)	>99	NONE	NONE	NONE	IRRITANT

PHYSICAL PROPERTIES

BOILING POINT: DEG C: N/A VAPOR PRESSURE: MM HG/ DEG C: N/A

ION: 009 SODA ASH EFFECTIVE DATE: 02/21/91

ORDER NO: 116465
PROD NO : 342640

NORTH LILY MINING CO

EUREKA ,UT 84628

WATERS & ROGERS , SUBSIDIARY OF UNIVAR (408)435-8700
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YBROUS; SODA ASH DENSE
A ASH LIGHT

MULA: NA2 C03 DATE ISSUED: 02/91

ECULAR WEIGHT: 106 SUPERCEDES: 10/90

A D RATING (MANUFACTURER) HMIS RATING

LTH: 2 HAZARD RATING SCALE: HEALTH: 2
E 0 0=MINIMAL 3=SERIOUS FIRE: 0
CTIVITY: 0 1=SLIGHT 4=SEVERE REACTIVITY: 0
CIAL: NONE 2=MODERATE

HAZARDOUS INGREDIENTS

			EXPOSURE LIMITS, PPM			
			OSHA	ACGIH	OTHER	
COMPONENT	CAS NO.	%	PEL	TLV	LIMIT	HAZARD
DIUM CARBONATE	(497-19-8)	>99	NONE	NONE	NONE	IRRITANT

PHYSICAL PROPERTIES

LING POINT: DEG F: N/A VAPOR PRESSURE: MM HG/20 DEG C: N/A

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

TING POINT, [redacted]
C[redacted]IC GRAVITY
E[redacted]RANCE AND C[redacted]
ORLESS, WHITE

O[redacted]ATILE (BY VOL.

I[redacted]HALED: REMOVE [redacted]
ATHING. GET IMMED

C[redacted]SE OF EYE CONTACT
[redacted]ER FOR 15 MINUTES, L
IMMEDIATE MEDICAL A[redacted]

[redacted]SE OF SKIN CONTACT:
[redacted]R. REMOVE CONTAMINAT
I[redacted]AL ATTENTION IF IRRI[redacted]

SWALLOWED: DO NOT INDUC
MILK. GET IMMEDIATE MED.
IT[redacted] TO AN UNCONSCIOUS OR C

[redacted]ES TO PHYSICIAN: NONE

[redacted]----------HEALTH

[redacted]RY ROUTES OF EXPOSURE: IN[redacted]

[redacted]NS AND SYMPTOMS OF EXPOSURE
INHALATION: BREATHING DUST [redacted] AND
[redacted] COUGHING AND CHEST DISCOMFO[redacted] CAUSE DAMAGE
THE NASAL SEPTUM.

[redacted]EYE CONTACT: DUSTS WILL IRRITA[redacted] AND PROLONGED CONTACT
[redacted]DAMAGE THE EYES.

[redacted]SKIN CONTACT: PROLONGED OR REPEATED CONTACT WITH THE DUST MAY
[redacted]TATE THE SKIN WITH BLISTERING AND REDNESS. SOLUTIONS MAY CAUSE
[redacted]ERE IRRITATION OR BURNS.

[redacted]SWALLOWED: SWALLOWING LARGE QUANTITIES MAY CAUSE NAUSEA, VOMITING,
[redacted]OMINAL PAIN, DIARRHEA AND COLLAPSE.

[redacted]

ON: 009 SODA ASH

EFFECTIVE DATE: 02/21/91

ORDER NO: 116465
PROD NO : 342640

NIC EFFECTS OF EXPOSURE: MAY CAUSE SENSITIZATION.

CAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE REPORTED.

----------TOXICITY DATA----------

RATS LD50 = 4 G/KG

RABBITS 500 MG/24 HR, MODERATE IRRITATION

ON: NO DATA FOUND.

ICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN
TIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR
CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

NONE

----------PERSONAL PROTECTION----------

LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAIN-
ISSIONS AT THE POINT OF USE BELOW THE PEL.

ECTION: IF USE CONDITIONS GENERATE DUSTS, WEAR A NIOSH-
RATOR APPROPRIATE FOR THOSE EMISSION LEVELS. APPROPRIATE
URS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CART-
E RESPIRATOR WITH PARTICULATE FILTERS, A SELF-CONTAINED BREATHING
ARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

ROTECTION: CHEMICAL GOGGLES AND FULL FACE SHIELD. IT IS GENERALLY
OGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH
CALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN
NJURY.

CTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, RUBBER
S, AND RUBBER APRON.

ER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE
Y AND READY FOR USE.

----------FIRE AND EXPLOSION INFORMATION----------

POINT, DEG F: N/A
METHOD USED: N/A

FLAMMABLE LIMITS IN AIR, %
LOWER: N/A UPPER: N/A

GNITION TEMPERATURE, DEG F: NOT APPLICABLE

INGUISHING MEDIA: USE WATER SPRAY, DRY CHEMICAL, CO2, OR ALCOHOL

[redacted]ION: 009 SODA ASH EFFECTIVE DATE: 02/21/91

ORDER NO: 116465
PROD NO : 342640

4.

[redacted] FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-
TAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER
AY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

[redacted]L FIRE AND EXPLOSION HAZARDS: EXTINGUISH ALL NEARBY SOURCES OF
ITION.

----------HAZARDOUS REACTIVITY----------

[redacted]ILITY: STABLE POLYMERIZATION: WILL NOT OCCUR
[redacted]IONS TO AVOID: OPEN FLAMES, WELDING ARCS, OR OTHER HIGH TEM-
ATURE SOURCES WHICH MAY INDUCE THERMAL DECOMPOSITION.

[redacted]ALS TO AVOID: ACIDS, ALUMINUM POWDER, FLUORINE, PHOSPHOROUS
[redacted]IDE, SULFURIC ACID AMMONICAL SILVER NITRATE AND MOLTEN LITHIUM.
CTS WITH HYDRATED LIME IN THE PRESENCE OF MOISTURE TO FORM CAUSTIC SODA,
[redacted]ROSIVE.

RDOUS DECOMPOSITION PRODUCTS: MAY LIBERATE CARBON MONOXIDE,
[redacted]ON DIOXIDE OR OXIDES OF SODIUM.

----------SPILL, LEAK, AND DISPOSAL PROCEDURES----------

[redacted]N TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING
[redacted]R BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED
ATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR
[redacted]RATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-
[redacted]YING CARTRIDGE RESPIRATOR EQUIPPED WITH PARTICULATE FILTERS MAY BE
ISFACTORY, IN ANY EVENT, ALWAYS WEAR EYE PROTECTION. FOR SMALL
LLS, SWEEP UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR
[redacted] SPILLS, SHOVEL INTO DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF
ERS, STORM DRAINS, SURFACE WATERS, AND SOIL.
PLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING,
[redacted]ANDLING AND DISPOSAL OF WASTE.

[redacted]POSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED
[redacted]EANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL.
[redacted]LT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO
ERTAIN PROPER DISPOSAL PROCEDURES.
E: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE
[redacted]CT TO PROPER WASTE DISPOSAL, AS ABOVE.

----------SPECIAL PRECAUTIONS----------

[redacted]GE AND HANDLING PRECAUTIONS: STORE IN A COOL, DRY, WELL-VENTILATED
[redacted]CE. STORE AWAY FROM ALL OTHER CHEMICALS AND POTENTIAL SOURCES OF

ON: 009 SODA ASH

EFFECTIVE DATE: 02/21/91

ORDER NO: 116465
PROD NO : 342640

INATION. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT
ESSURE TO EMPTY CONTAINER. WASH THOROUGHLY AFTER HANDLING. DO
GET IN EYES, ON SKIN, OR ON CLOTHING.

AND MAINTENANCE PRECAUTIONS: NONE.

R PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL
PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND
EMPTY CONTAINERS AS IF THEY WERE FULL.

----------ECOLOGICAL INFORMATION SECTION----------

DATA FOUND

----------OTHER REGULATORY INFORMATION----------

TION 313: NONE

OSITION 65: SEE BELOW

TION 313 & PROP. 65: SEE BELOW

TION 313 (WITH CHEMICALS LISTED): NONE

POSITION 65 (WITH CHEMICALS LISTED):

MICAL(s)	CAS NO.	% WT.
ENIC	7440-38-2	TRACES
OMIUM	7440-47-3	TRACES
D	7439-92-1	TRACES

SSACHUSETTS: UNDER THE MASSACHUSETTS RIGHT-TO-KNOW LAW, HAZARDOUS
BSTANCE AND EXTRAORDINARILY HAZARDOUS SUBSTANCES COMPONENTS PRESENT IN
S PRODUCT WHICH REQUIRES REPORTING ARE:

AORDINARILY HAZARDOUS SUBSTANCES EMICAL(S)	CAS NO.	CONCENTRATION (.01-.0001%)
NIC	7440-38-2	TRACES
MIUM	7440-47-3	TRACES
SYLVANIA	NONE	

VAN WATERS & ROGERS INC.
MATERIAL SAFETY DATA SHEET

ON: C09 SODA ASH

EFFECTIVE DATE: 02/21/91

ORDER NO: 116465
PROD NO : 342640

IFORNIA SCAQMD: NONE

THE INGREDIENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY.

----------OTHER REGULATORY INFORMATION----------

RODUCT CONTAINS THE FOLLOWING CHEMICAL(S) CONSIDERED BY THE STATE
LIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986
OPOSITION 65) AS CAUSING CANCER OR REPRODUCTIVE TOXICITY AND FOR
H WARNINGS ARE NOW REQUIRED:

CHEMICAL	CAS NO.

----------REVISION----------

90: ADDED SYNONYM.

ADDED: MOLECULAR WEIGHT, HMIS RATING, NOTES TO PHYSICIAN,
IGNITION TEMPERATURE, MATERIALS TO AVOID, PH, % VOLATILE, ECOLOGICAL
MATION, OTHER REGULATORY INFORMATION 1,2,3,4,5-% WT., 7,8,9,10

91: ADDED: SYNONYM

ON: 009 SODA ASH EFFECTIVE DATE: 02/21/91

ORDER NO: 114465
PROD NO : 342640

FOR ADDITIONAL INFORMATION

NTACT: MSDS COORDINATOR VW&R SALT LAKE CTY OFFICE
DURING BUSINESS HOURS, PACIFIC TIME (406)495-8700

)4/24/91 10:50 PRODUCT: 342640 CUST NO: 121045 ORDER NO: 114465

NOTICE

/AN WATERS & ROGERS INC. ("VW&R") EXPRESSLY DISCLAIMS ALL EXPRESS OR

LIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE,

H RESPECT TO THE PRODUCT OR INFORMATION PROVIDED HEREIN. **

ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA OBTAINED FROM THE
UFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS
IEVED TO BE ACCURATE, VW&R MAKES NO REPRESENTATIONS AS TO ITS ACCURACY OR
FICIENCY. CONDITIONS OF USE ARE BEYOND VW&RS CONTROL AND THEREFORE USERS
RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS TO
ERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND THEY
UME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM
PUBLICATION OR USE OF, OR RELIANCE UPON , INFORMATION CONTAINED HEREIN.
S INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT
ATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER
CESS.

*** E N D O F M S D S ***

ORT NUMBER: 703
S [illegible]O: P1169

VAN WATERS & ROGERS INC.
MATERIAL SAFETY DATA SHEET

ION: 004 SODIUM NITRATE REVISION DATE: 01/16/90

ORDER NO: 112403
PROD NO : 350170

NORTH LILY MINING CO

EUREKA ,UT 84628

WATERS & ROGERS , SUBSIDIARY OF UNIVAR (408)435-8700
O NORTON BUILDING , SEATTLE , WA 98104

----------EMERGENCY ASSISTANCE ----------

C EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

---------- FOR PRODUCT AND SALES INFORMATION ----------

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE AT
VW&R SALT LAKE CTY OFFICE 801-328-1112 SALT LAKE CT, UT

----------PRODUCT IDENTIFICATION----------

CT NAME: SODIUM NITRATE
MON NAMES/SYNONYMS: NITRIC ACID,
IUM SALT; NITRATE OF SODA; NITRATINE;
AN NITRATE; SODIUM NITRATE 35%

MULA: NA N 03
D RATING (NFPA 49)
EALTH: 0
FIRE: 0
REACTIVITY: 0
PECIAL: OXY

CAS NO.: 7631-99-4
VW&R CODE: P1169

DATE ISSUED: 01/90
SUPERCEDES: 08/89
HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

----------HAZARDOUS INGREDIENTS----------

		EXPOSURE LIMITS, MG/M3			
		OSHA	ACGIH	OTHER	
COMPONENT	%	PEL	TLV	LIMIT	HAZARD
SODIUM NITRATE	>99	15 (NUISANCE DUST)	10 (NUISANCE DUST)	2 (BASF)	OXIDIZER

[illegible]

ON: 4004 SODIUM NITRATE

REVISION OF: 01/16/90

ORDER NO: 112403
PROD NO : 350170

EARANCE AND ODOR: WHITE LIGHT YELLOW CRYSTALLINE DER; ODORLESS

EVAPORATION RATE (BUTYL ACETATE=1): 0

FIRST AID MEASURES

INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT ATHING. GET IMMEDIATE MEDICAL ATTENTION.

CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING ER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. MMEDIATE MEDICAL ATTENTION.

CASE OF SKIN CONTACT: IMMEDIATELY FLUSH SKIN WITH LOTS OF RUNNING E FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH OR REUSE. GET IMMEDIATE MEDICAL ATTENTION.

SWALLOWED: IF CONSCIOUS, IMMEDIATELY INDUCE VOMITING BY GIVING 2 ES OF WATER AND STICKING A FINGER DOWN THE THROAT. GET IMMEDIATE CAL ATTENTION. DO NOT GIVE ANYTHING TO AN UNCONSCIOUS OR CONVULSING SON.

HEALTH HAZARD INFORMATION

RY ROUTES OF EXPOSURE: SKIN OR EYE CONTACT

NS AND SYMPTOMS OF EXPOSURE
NHALATION: BREATHING DUST MAY IRRITATE THE NOSE, THROAT, MUCOUS ANES AND RESPIRATORY TRACT, CAUSE COUGHING AND CHEST DISCOMFORT, RTNESS OF BREATH, HEADACHE, AND DIZZINESS.

YE CONTACT: DUSTS MAY IRRITATE THE EYES WITH SYMPTOMS INCLUDING NESS, ITCHING, AND PAIN.

KIN CONTACT: CONTACT WITH THE DUST MAY IRRITATE THE SKIN, CAUSING NESS, ITCHING AND PAIN.

WALLOWED: SWALLOWING MAY CAUSE GASTRO ENTERITIS AND ABDOMINAL S. PURGING AND DIURESIS CAN BE EXPECTED. REPEATED INGESTION OF GE AMOUNTS CAN LEAD TO CYANOSIS, CONVULSIONS, PARALYSIS OR COMA. E CASES OF NITRATES BEING CONVERTED TO THE MORE TOXIC NITRITES HAVE REPORTED, MOSTLY WITH INFANTS.

[redacted]

RT NUMBER: 703 VAN WATERS & ROGERS INC.
: P1169 MATERIAL SAFETY DATA SHEET

REVISION OF: 01/16/90

N: 004 SODIUM NITRATE

ORDER NO: 112403
PROD NO : 350170

IC CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: INDIVIDUALS WITH ISTORY OF KIDNEY OR LUNG DISEASE MAY BE MORE SUSCEPTIBLE TO THE ECTS OF THIS SUBSTANCE.

----------TOXICITY DATA----------

L HUMAN LDLO = 500 MG/KG; RAT LDLO = 200 MG/KG; HUMAN DEADLY DOSE AI UT 15 GRAMS; RAT LD50 = 4.3 G/KG

M L: NO DATA FOUND

ALATION: NO DATA FOUND

:C NOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR SEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

DATA: PROLONGED EXPOSURE TO SODIUM NITRATE CAUSES BLOOD DISORDERS NFANTS. OLIN CORPORATION, A MANUFACTURER, REPORTS THIS PRODUCT NOT OWN TO BE MUTAGENIC.

----------PERSONAL PROTECTION----------

V LATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAIN- ING DUST EMISSIONS AT THE POINT OF USE BELOW THE PEL.

S IRATORY PROTECTION: IF USE CONDITIONS GENERATE DUSTS, WEAR A NIOSH- P VED RESPIRATOR APPROPRIATE FOR THOSE EMISSION LEVELS. APPROPRIATE SPIRATORS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CART- DGE RESPIRATOR WITH PARTICULATE FILTERS, A SELF-CONTAINED BREATHING P RATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

E PROTECTION: CHEMICAL GOGGLES UNLESS A FULL FACEPIECE RESPIRATOR IS S WORN. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE R WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE THE SEVERITY OF AN EYE INJURY.

C ECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, RUBBER GLOVES, AND RUBBER APRON.

PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE

[redacted]

N/A

[redacted] SODIUM NITRATE REVISION DT: 01/16/90

ORDER NO: 112403
PROD NO.: 350170

INGUISHING MEDIA: FLOOD WITH WATER, OR USE APPROPRIATE MEDIUM FOR INGUISHING SURROUNDING FIRE.

CIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-TAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER AY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

SUAL FIRE AND EXPLOSION HAZARDS: THIS SUBSTANCE IS A STRONG OXIDIZER S HEAT OF REACTION WITH REDUCING AGENTS OR COMBUSTIBLES MAY CAUSE ITION. THIS MATERIAL IS EXPLOSIVE WITH SHOCK, HEAT, OR FRICTION. IUM NITRATE DECOMPOSES EXPLOSIVELY WHEN HEATED OVER 1,000 DEG F. S PRODUCT MAY FUSE OR MELT IN LARGE FIRES AND USING WATER TO EX-GUISH MAY RESULT IN SCATTERING OF MOLTEN MATERIAL. WATER SHOULD NOT APPLIED TO MOLTEN SALT BATHS.

----------HAZARDOUS REACTIVITY----------

BILITY: STABLE POLYMERIZATION: WILL NOT OCCUR
TIONS TO AVOID: NONE

ERIALS TO AVOID: REACTS WITH ACIDS TO EMIT NITROGEN DIOXIDE GASES. TACT WITH OXIDIZABLE MATERIALS SUCH AS THE FOLLOWING MAY SE AN EXPLOSION: BARIUM RHODANIDE, BORON PHOSPHIDE, CYANIDES, IUM THIOSULFATE, SODIUM HYPOPHOSPHITE, SULFUR PLUS CHARCOAL, POWDERED MNUM, ALUMINUM OXIDE. FIBROUS ORGANIC MATERIALS SUCH AS WOOD, JUTE OTHER CELLULOSIC MATERIALS CAN BECOME HIGHLY COMBUSTIBLE BY NITRATE REGNATION. ALSO AVOID TRICHLOROETHYLENE, ZINC, AND SODIUM ACETATE.

ARDOUS DECOMPOSITION PRODUCTS: WILL LIBERATE OXIDES OF NITROGEN.

----------SPILL, LEAK, AND DISPOSAL PROCEDURES----------

ION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING BER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED ATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR PIRATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-IFYING CARTRIDGE RESPIRATOR EQUIPPED WITH PARTICULATE FILTERS MAY BE FACTORY. IN ANY EVENT, ALWAYS WEAR EYE PROTECTION. FOR SMALL LS, SWEEP UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR GE SPILLS, SHOVEL INTO DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF [redacted] STORM DRAINS, SURFACE WATERS, AND SEWERS. [redacted] ALL APPLICABLE GOVERNMENT REGULATIONS ON SPILL REPORTING HANDLING AND DISPOSAL.

: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE
JECT TO PROPER WASTE DISPOSAL, AS ABOVE.

----------SPECIAL PRECAUTIONS----------

RAGE AND HANDLING PRECAUTIONS: STORE IN A COOL, DRY, WELL-VENTILATED
CE. STORE AWAY FROM ALL OTHER CHEMICALS AND POTENTIAL SOURCES OF
TAMINATION. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. PROTECT
PHYSICAL DAMAGE. DO NOT USE PRESSURE TO EMPTY CONTAINER. WASH
ROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

AI AND MAINTENANCE PRECAUTIONS: NONE.

ER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL
AI PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND
SE EMPTY CONTAINERS AS IF THEY WERE FULL.

----------REVISION----------

O: ADDED SYNONYM.

[redacted]

FOR ADDITIONAL INFORMATION

CONTACT: MSDS COORDINATOR VW&R SALT LAKE CTY OFFICE
DURING BUSINESS HOURS, PACIFIC TIME (408)435-8700

[redacted]/15/91 11:15 PRODUCT: 350170 CUST NO: 121045 ORDER NO: 112403

NOTICE

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* * * E N D O F M S D S * * *

ORT NUMBER: 703
S NO: P1113

VAN WATERS & ROGERS INC.
MATERIAL SAFETY DATA SHEET

SION: 007 BORAX PENTAHYDRATE

REVISION OF: 12/28/89

ORDER NO: 109878
PROD NO : 225671

NORTH LILY MINING CO

EUREKA ,UT 84628

N WATERS & ROGERS , SUBSIDIARY OF UNIVAR (408)435-8700
O NORTON BUILDING , SEATTLE , WA 98104

EMERGENCY ASSISTANCE

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

FOR PRODUCT AND SALES INFORMATION

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE AT
VW&R SALT LAKE CTY OFFICE 801-328-1112 SALT LAKE CT, UT

PRODUCT IDENTIFICATION

DUCT NAME: BORAX PENTAHYDRATE
ON NAMES/SYNONYMS: SODIUM TETRABORATE PENTAHYDRATE

CAS NO.: 1330-43-4
VW&R CODE: P1113

RMULA: NA2 B4 07 5H20

DATE ISSUED: 11/89
SUPERCEDES: 08/89

ZARD RATING (MANUFACTURER)
HEALTH: 1
FIRE: 0
REACTIVITY: 0
SPECIAL: NONE

HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

HAZARDOUS INGREDIENTS

COMPONENT	CAS NO.	%	EXPOSURE LIMITS, PPM OSHA PEL	ACGIH TLV	OTHER LIMIT	HAZARD
DIUM TETRABORATE NTAHYDRATE	1330-43-4	>99	NONE	5	NONE	IRRITANT

PHYSICAL PROPERTIES

[redacted]

SION: 007 BORAX PENTAHYDRATE

REVISION OF: 12/28/89

ORDER NO: 109870
PROD NO : 225671

FIRST AID MEASURES

INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT ATHING. GET IMMEDIATE MEDICAL ATTENTION.

CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING ER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. IMMEDIATE MEDICAL ATTENTION.

CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND ER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET DICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

SWALLOWED: IF CONSCIOUS, IMMEDIATELY INDUCE VOMITING BY GIVING 2 SSES OF WATER AND STICKING A FINGER DOWN THE THROAT. GET IMMEDIATE DICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS CONVULSING PERSON.

HEALTH HAZARD INFORMATION

ARY ROUTES OF EXPOSURE: SKIN OR EYE CONTACT, INHALATION.

NS AND SYMPTOMS OF EXPOSURE
INHALATION: BREATHING DUST MAY IRRITATE THE NOSE AND THROAT AND USE COUGHING AND CHEST DISCOMFORT.

EYE CONTACT: DUSTS MAY IRRITATE THE EYES.

SKIN CONTACT: NO IRRITATION IS LIKELY AFTER BRIEF CONTACT BUT MAY RRITATING AFTER PROLONGED CONTACT.

SWALLOWED: NONE CURRENTLY KNOWN.

RONIC EFFECTS OF EXPOSURE: NO SPECIFIC INFORMATION AVAILABLE.

DICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE REPORTED.

TOXICITY DATA

AL: RATS LD50= 3.4 G/KG

RAL: RABBITS LD50= .2 G/KG

HALATION MAY CAUSE SLIGHT NASAL IRRITATION AS A NUISANCE DUST.

INGREDIENT(S) OF THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR [illegible] BOARD ON CARCINOGENICITY OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

PORT NUMBER: 703
OS NO: P1113

VAN WATERS & ROGERS INC.
MATERIAL SAFETY DATA SHEET

SION: 007 BORAX PENTAHYDRATE

REVISION OF: 12/28/89

ORDER NO: 109878
PROD NO : 225671

HE DATA: NONE

----------PERSONAL PROTECTION----------

NT LATION: GENERAL ROOM VENTILATION.

SP RATORY PROTECTION: WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE R THE DUST CONCENTRATION AT THE POINT OF USE. APPROPRIATE RESPIRATORS Y BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RES- RATOR WITH PARTICULATE FILTERS, A SELF-CONTAINED BREATHING APPARATUS E PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

E PROTECTION: CHEMICAL GOGGLES UNLESS A FULL FACEPIECE RESPIRATOR IS S WORN. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE R WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE THE SEVERITY OF AN EYE INJURY.

O ECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, AND SAFETY SHOES.

ER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE A BY AND READY FOR USE.

----------FIRE AND EXPLOSION INFORMATION----------

A H POINT, DEG F: N/A
METHOD USED: N/A

FLAMMABLE LIMITS IN AIR, %
LOWER: N/A UPPER: N/A

TINGUISHING MEDIA: USE WATER SPRAY, DRY CHEMICAL, CO2, OR ALCOHOL A .

ECIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF- NTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER Y TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

UAL FIRE AND EXPLOSION HAZARDS: NONE.

----------HAZARDOUS REACTIVITY----------

ILITY: STABLE
POLYMERIZATION: WILL NOT OCCUR
ITIONS TO AVOID: EXCESSIVE HEAT AND CONTAMINATION OF ANY KIND.

RIALS TO AVOID: ELEMENTAL ZIRCONIUM

ZARDOUS DECOMPOSITION PRODUCTS: NONE

[redacted]

BBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A FULL FACEPIECE OR A
LF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR WITH PARTICULATE FILTERS.
AR CHEMICAL GOGGLES IF A HALF MASK IS WORN. FOR SMALL SPILLS, SWEEP
AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS,
OVEL INTO DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF SEWERS, STORM
AI S, SURFACE WATERS, AND SOIL.
MPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING,
D HANDLING AND DISPOSAL OF WASTE.

SP SAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED
CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL.
NSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO
CERTAIN PROPER DISPOSAL PROCEDURES.
TE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE
BJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

SPECIAL PRECAUTIONS

OR AGE AND HANDLING PRECAUTIONS: STORE IN A DRY, WELL-VENTILATED
E AWAY FROM INCOMPATIBLE MATERIALS. KEEP CONTAINER TIGHTLY CLOSED
NOT IN USE. DO NOT USE PRESSURE TO EMPTY CONTAINER. WASH
OROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

PAIR AND MAINTENANCE PRECAUTIONS: NONE.

HER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL
TAIN PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND
NDLE EMPTY CONTAINERS AS IF THEY WERE FULL.

OTHER REGULATORY INFORMATION

IS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) CONSIDERED BY THE STATE
ALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986
ROPOSITION 65) AS CAUSING CANCER OR REPRODUCTIVE TOXICITY AND FOR
ICH WARNINGS ARE NOW REQUIRED:

CHEMICAL	CAS NO.
ARSENIC	7440-38-2

REVISION

REVISED FORMATTING CHANGES FOR COMPUTER CONVERSION ONLY.

PO[redacted]T NUMBER: 703
DS NO: P1113

VAN WATERS & ROGERS INC.
MATERIAL SAFETY DATA SHEET

RSION: 007 BORAX PENTAHYDRATE

REVISION OF: 12/28/89

ORDER NO: 109878
PROD NO : 225671

FOR ADDITIONAL INFORMATION

CONTACT: MSDS COORDINATOR VW&R SALT LAKE CTY OFFICE
DURING BUSINESS HOURS, PACIFIC TIME (408)435-8700

11/16/91 11:24 PRODUCT: 225671 CUST NO: 121045 ORDER NO: 109878

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DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND THEY
ASSUME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM
THE PUBLICATION OR USE OF, OR RELIANCE UPON , INFORMATION CONTAINED HEREIN.
THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT
RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER
PROCESS.

* * * E N D O F M S D S * * *

Date: 11/28/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

Group #: 41748
Lab #: 00-U011407
Project: NORTH LILY
Sample Desc: Refinery Sweepings
Sample Matrix: SLUDGE-S
Date/Time Sampled: 11/10/00 , 13:00
Date/Time Received: 11/10/00 , 16:25

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Mercury, as Hg TCLP, mg/L	440	0.02	11/22/00 13:30	SW 846 7470A	MJB
TCLP Ext. Solution pH, units	4.9	0.05	11/21/00 9:00		MJB
pH, solution selection, units	6.5	0.05	11/21/00 9:00	SW 846 9045	MJB
pH, after extraction TCLP, units	6.0	0.05	11/21/00 9:00	SW 846 9045	MJB
Arsenic (TCLP), as As, mg/L	< 0.2	0.2	11/27/00 12:36	SW-846 6010	LH
Barium (TCLP), as Ba, mg/L	0.4	0.1	11/27/00 12:36	SW-846 6010	LH
Cadmium (TCLP), as Cd, mg/L	14	0.01	11/27/00 12:36	SW-846 6010	LH
Chromium (TCLP), as Cr, mg/L	< 0.02	0.02	11/27/00 12:36	SW-846 6010	LH
Lead (TCLP), as Pb, mg/L	32	0.1	11/27/00 12:36	SW-846 6010	LH
Selenium (TCLP), as Se, mg/L	0.1	0.1	11/27/00 12:36	SW-846 6010	LH
Silver (TCLP), as Ag, mg/L	0.14	0.01	11/27/00 12:36	SW-846 6010	LH

NOTE: Sample not received on ice.

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007946
Project: SILVER PEAK
Sample Desc: Heap Leach Outfall
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 , 14:00
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Calcium (T), as Ca, mg/L	350	0.2	8/29/00 15:19	EPA 200.7	JJT
Chromium (D), as Cr, mg/L	< 0.005	0.005	8/29/00 15:19	EPA 200.7	JJT
Copper (D), as Cu, mg/L	19	0.01	8/29/00 15:19	EPA 200.7	JJT
Magnesium (T), as Mg, mg/L	29	0.2	8/29/00 15:19	EPA 200.7	JJT
Potassium (T), as K, mg/L	310	0.2	8/29/00 15:19	EPA 200.7	JJT
Sodium (T), as Na, mg/L	5,600	20	9/ 5/00 16:25	EPA 200.7	JJT
Zinc (D), as Zn, mg/L	0.42	0.01	8/29/00 15:19	EPA 200.7	JJT
Arsenic (D), as As, mg/L	0.2464	0.0005	9/ 6/00 14:16	EPA 200.8	JJT
Cadmium (D), as Cd, mg/L	0.0076	0.0005	9/ 6/00 14:16	EPA 200.8	JJT
Lead (D), as Pb, mg/L	0.1581	0.0005	9/ 6/00 14:16	EPA 200.8	JJT
Selenium (D), as Se, mg/L	0.2707	0.0005	9/ 6/00 14:16	EPA 200.8	JJT
Silver (D), as Ag, mg/L	0.3147	0.0005	9/ 6/00 14:16	200.2/200.8	JJT
Temperature, Receiving, C	18.0		8/23/00 10:15		CSM

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007946
Project: SILVER PEAK
Sample Desc: Heap Leach Outfall
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 , 14:00
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					

NOTE: Sample received on ice.

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007947
Project: SILVER PEAK
Sample Desc: SP-1
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Total Organic Halogens, mg/L	< 0.05	0.05	8/28/00	SW846 9020	AWAL, Inc.
Temperature, Receiving, C	16.0		8/23/00 10:15		CSM

NOTE: Sample received on ice.
TOX analysis performed by American West Lab,
463 West 3600 South, SLC, UT 84115.

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007948
Project: SILVER PEAK
Sample Desc: SP-2
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Total Organic Halogens, mg/L	< 0.05	0.05	8/28/00	SW846 9020	AWAL, Inc.
Temperature, Receiving, C	17.0		8/23/00 10:15		CSM

NOTE: Sample received on ice.
TOX analysis performed by American West Lab,
463 West 3600 South, SLC, UT 84115.

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007949
Project: SILVER PEAK
Sample Desc: SP-3
Sample Matrix: OIL/OILY WASTE
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Flashpoint 1010, Degs. F	> 200	70	8/28/00 11:39	SW846 1010	AER
Arsenic (T), as As, mg/Kg	< 10	10	8/28/00 14:11	SW-846 6010	JJT
Cadmium (T), as Cd, mg/Kg	< 0.5	0.5	8/28/00 14:11	SW-846 6010	JJT
Chromium(T), as Cr, mg/Kg	< 0.5	0.5	8/28/00 14:11	SW-846 6010	JJT
Lead (T), as Pb, mg/Kg	< 7	7	8/28/00 14:11	SW-846 6010	JJT
Total Organic Halogens, mg/Kg	< 1	1	9/28/00	SW846 9020B	AWAL, Inc.
Temperature, Receiving, C	17.0		8/23/00 10:15		CSM

NOTE: Sample received on ice.
TOX analysis performed by American West Lab,
463 West 3600 South, SLC, UT 84115.

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007950
Project: SILVER PEAK
Sample Desc: SP-4
Sample Matrix: OIL/OILY WASTE
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Total Organic Halogens, mg/Kg	< 1	1	8/28/00	SW846 9020B	AWAL, Inc.
Temperature, Receiving, C	18.0		8/23/00 10:15		CSM

NOTE: Sample received on ice.
TOX analysis performed by American West Lab,
463 West 3600 South, SLC, UT 84115.

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007951
Project: SILVER PEAK
Sample Desc: SP-5
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
TCLP Ext. Solution pH, units	4.93	0.05	8/25/00 10:00		MJB
pH, solution selection, units	6.00	0.05	8/25/00 10:00	SW 846 9045	MJB
pH, after extraction TCLP, units	4.50	0.05	8/25/00 10:00	SW 846 9045	MJB
Arsenic (T), as As, mg/L	< 10	10	8/28/00 14:11	SW-846 6010	JJT
Arsenic (TCLP), as As, mg/L	< 0.2	0.2	8/29/00 10:51	SW-846 6010	JJT
Barium (TCLP), as Ba, mg/L	0.2	0.1	8/29/00 10:51	SW-846 6010	JJT
Cadmium (T), as Cd, mg/L	< 0.5	0.5	8/28/00 14:11	SW-846 6010	JJT
Cadmium (TCLP), as Cd, mg/L	< 0.01	0.01	8/29/00 10:51	SW-846 6010	JJT
Chromium(T), as Cr, mg/L	0.8	0.5	8/28/00 14:11	SW-846 6010	JJT
Chromium (TCLP), as Cr, mg/L	< 0.02	0.02	8/29/00 10:51	SW-846 6010	JJT
Lead (T), as Pb, mg/L	9	7	8/28/00 14:11	SW-846 6010	JJT
Lead (TCLP), as Pb, mg/L	< 0.1	0.1	8/29/00 10:51	SW-846 6010	JJT
Mercury (TCLP), as Hg, mg/L	< 0.0002	0.0002	8/28/00 12:40	SW 846 7470A	MJB
Selenium (TCLP), as Se, mg/L	< 0.1	0.1	8/29/00 10:51	SW-846 6010	JJT
Silver (TCLP), as Ag, mg/L	< 0.01	0.01	8/29/00 10:51	SW-846 6010	JJT

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007951
Project: SILVER PEAK
Sample Desc: SP-5
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Total Organic Halogens, mg/Kg	< 1	1	8/28/00	SW846 9020B	AWAL, Inc.
Temperature, Receiving, C	19.0		8/23/00 10:15		CSM

NOTE: Sample received on ice.
TOX analysis performed by American West Lab,
463 West 3600 South, SLC, UT 84115.
Flashpoint not completed due to limited sample volume.

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007951
Project: SILVER PEAK
Sample Desc: SP-5
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

RECEIVING TEMPERATURE: 19.0 C

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	METHOD
Volatiles			
Analyst: MSS Date Analyzed: 9/ 5/00	Time: 12:58		
Benzene, ug/L	< 2	2	SW846-8260A
Bromobenzene, ug/L	< 5	5	SW846-8260A
Bromochloromethane, ug/L	< 5	5	SW846-8260A
Bromodichloromethane, ug/L	< 5	5	SW846-8260A
Bromoform, ug/L	< 5	5	SW846-8260A
Bromomethane, ug/L	< 20	20	SW846-8260A
n-Butylbenzene, ug/L	< 10	10	SW846-8260A
sec-Butylbenzene, ug/L	< 10	10	SW846-8260A
tert-Butylbenzene, ug/L	< 10	10	SW846-8260A
Carbon Tetrachloride, ug/L	< 6	6	SW846-8260A
Chlorobenzene, ug/L	< 2	2	SW846-8260A
Chloroethane, ug/L	< 10	10	SW846-8260A
Chloroform, ug/L	< 6	6	SW846-8260A
Chloromethane, ug/L	< 20	20	SW846-8260A

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007951
Project: SILVER PEAK
Sample Desc: SP-5
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

RECEIVING TEMPERATURE: 19.0 C

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	METHOD
2-Chlorotoluene, ug/L	< 10	10	SW846-8260A
4-Chlorotoluene, ug/L	< 10	10	SW846-8260A
1,2-Dibromo-3-chloropropane, ug/L	< 100	100	SW846-8260A
Dibromochloromethane, ug/L	< 5	5	SW846-8260A
1,2-Dibromoethane, ug/L	< 5	5	SW846-8260A
Dibromomethane, ug/L	< 5	5	SW846-8260A
o-Dichlorobenzene, ug/L	< 10	10	SW846-8260A
1,3-Dichlorobenzene, ug/L	< 10	10	SW846-8260A
p-Dichlorobenzene, ug/L	< 10	10	SW846-8260A
Dichlorodifluoromethane, ug/L	< 50	50	SW846-8260A
1,1-Dichloroethane, ug/L	< 5	5	SW846-8260A
1,2-Dichloroethane, ug/L	< 6	6	SW846-8260A
1,1-Dichloroethylene, ug/L	< 6	6	SW846-8260A
cis-1,2-Dichloroethene, ug/L	< 5	5	SW846-8260A
trans-1,2-Dichloroethene, ug/L	< 5	5	SW846-8260A
1,2-Dichloropropane, ug/L	< 5	5	SW846-8260A

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007951
Project: SILVER PEAK
Sample Desc: SP-5
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

RECEIVING TEMPERATURE: 19.0 C

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	METHOD
1,3-Dichloropropane, ug/L	< 5	5	SW846-8260A
2,2-Dichloropropane, ug/L	< 10	10	SW846-8260A
1,1-Dichloropropene, ug/L	< 5	5	SW846-8260A
cis-1,3-Dichloropropene, ug/L	< 5	5	SW846-8260A
trans-1,3-Dichloropropene, ug/L	< 5	5	SW846-8260A
Ethylbenzene, ug/L	< 6	6	SW846-8260A
Hexachlorobutadiene, ug/L	< 10	10	SW846-8260A
Isopropylbenzene, ug/L	< 10	10	SW846-8260A
4-Isopropyltoluene, ug/L	< 10	10	SW846-8260A
Methyl Isobutyl Ketone, ug/L	< 60	60	SW846-8260A
Methylene Chloride, ug/L	< 10	10	SW846-8260A
Naphthalene, ug/L	18.4	10	SW846-8260A
n-propylbenzene, ug/L	< 10	10	SW846-8260A
Styrene, ug/L	< 5	5	SW846-8260A
1,1,1,2-Tetrachloroethane, ug/L	< 5	5	SW846-8260A
1,1,2,2-Tetrachloroethane, ug/L	< 5	5	SW846-8260A

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007951
Project: SILVER PEAK
Sample Desc: SP-5
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

RECEIVING TEMPERATURE: 19.0 C

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	METHOD
Tetrachloroethylene, ug/L	< 6	6	SW846-8260A
Toluene, ug/L	< 10	10	SW846-8260A
1,2,3-Trichlorobenzene, ug/L	< 10	10	SW846-8260A
1,2,4-Trichlorobenzene, ug/L	< 10	10	SW846-8260A
1,1,1-Trichloroethane, ug/L	< 6	6	SW846-8260A
1,1,2-Trichloroethane, ug/L	< 6	6	SW846-8260A
Trichloroethylene, ug/L	< 6	6	SW846-8260A
Trichlorofluoromethane, ug/L	< 10	10	SW846-8260A
1,2,3-Trichloropropane, ug/L	< 10	10	SW846-8260A
1,2,4-Trimethylbenzene, ug/L	< 10	10	SW846-8260A
1,3,5-Trimethylbenzene, ug/L	< 10	10	SW846-8260A
Vinyl Chloride, ug/L	< 6	6	SW846-8260A
Xylenes, ug/L	< 6	6	SW846-8260A

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

CHEMTECH-FORD ANALYTICAL LABORATORIES

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007951
Project: SILVER PEAK
Sample Desc: SP-5
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

RECEIVING TEMPERATURE: 19.0 C

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	METHOD

NOTE: Sample received on ice.
TOX analysis performed by American West Lab,
463 West 3600 South, SLC, UT 84115.
Flashpoint not completed due to limited sample volume.

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007952
Project: SILVER PEAK
Sample Desc: SP-6
Sample Matrix: OIL/OILY WASTE
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Mercury, as Hg Total, mg/Kg	< 0.05	0.05	8/30/00 15:40	SW 846 7471A	MJB
pH, Solids/Sludges Paste, units	6.50	0.05	8/28/00 17:00	SW 846 9045	TSM
Arsenic (T), as As, mg/Kg	< 10	10	8/28/00 14:11	SW-846 6010	JJT
Barium (T), as Ba, mg/Kg	3.6	0.5	8/28/00 14:11	SW-846 6010	JJT
Cadmium (T), as Cd, mg/Kg	< 0.5	0.5	8/28/00 14:11	SW-846 6010	JJT
Chromium(T), as Cr, mg/Kg	< 0.5	0.5	8/28/00 14:11	SW-846 6010	JJT
Lead (T), as Pb, mg/Kg	160	7	8/28/00 14:11	SW-846 6010	JJT
Selenium (T), as Se, mg/Kg	< 10	10	8/28/00 14:11	SW-846 6010	JJT
Silver (T), as Ag, mg/Kg	< 0.5	0.5	8/28/00 14:11	SW-846 6010	JJT
Total Organic Halogens, mg/Kg	< 1	1	8/28/00	SW846 9020B	AWAL, Inc.
Temperature, Receiving, C	18.0		8/23/00 10:15		CSM

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007952
Project: SILVER PEAK
Sample Desc: SP-6
Sample Matrix: OIL/OILY WASTE
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					

NOTE: Sample received on ice.
TOX analysis performed by American West Lab,
463 West 3600 South, SLC, UT 84115.

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007953
Project: SILVER PEAK
Sample Desc: SP-7
Muriatic Acid.
Sample Matrix: SOLVENT
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Mercury, as Hg Total, mg/Kg	< 0.05	0.05	8/30/00 15:40	SW 846 7471A	MJB
pH,	0.0	0.1	8/23/00 10:30	SW 846 9045	LPS
Arsenic (T), as As, mg/Kg	< 10	10	8/28/00 14:11	SW-846 6010	JJT
Barium (T), as Ba, mg/Kg	33	0.5	8/28/00 14:11	SW-846 6010	JJT
Cadmium (T), as Cd, mg/Kg	< 0.5	0.5	8/28/00 14:11	SW-846 6010	JJT
Chromium(T), as Cr, mg/Kg	0.6	0.5	8/28/00 14:11	SW-846 6010	JJT
Lead (T), as Pb, mg/Kg	< 7	7	8/28/00 14:11	SW-846 6010	JJT
Selenium (T), as Se, mg/Kg	< 10	10	8/28/00 14:11	SW-846 6010	JJT
Silver (T), as Ag, mg/Kg	< 0.5	0.5	8/28/00 14:11	SW-846 6010	JJT
Temperature, Receiving, C	18.0		8/23/00 10:15		CSM

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007953
Project: SILVER PEAK
Sample Desc: SP-7
Muriatic Acid.
Sample Matrix: SOLVENT
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					

NOTE: Sample received on ice.
Reported pH is an approxiamte value.

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007954
Project: SILVER PEAK
Sample Desc: SP-8
Sample Matrix: OIL/OILY WASTE
Date/Time Sampled: 8/22/00 ,
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Total Organic Halogens, mg/Kg	< 1	1	8/28/00	SW846 9020B	AWAL, Inc.
Temperature, Receiving, C	19.0		8/23/00 10:15		CSM

NOTE: Sample received on ice.
Sample not run for pH due to matrix.
TOX analysis performed by American West Lab,
463 West 3600 South, SLC, UT 84115.

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

AMERICAN
WEST
ANALYTICAL
LABORATORIES

4[illegible] West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

JBR Consultants Group

23-May-01

Project: N. Lilly-01

Lab Set ID: L46046

All analysis performed in accordance to NELAC protocols. Any questions regarding the results please feel free to call one of the following at (801) 263-8686 or (888) 263-8686:

Paul Ellingson
Laboratory Manager

Mark Broadhead
Inorganic & Metals Supervisor

Greg Hess
Organic Supervisor

Pat Noteboom
Project Coordinator

Peggy McNicol
QA Officer

AMERICAN
WEST
ANALYTICAL
LABORATORIES

4[illegible] West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801) 263-8687

INORGANIC ANALYSIS REPORT

Client: JBR Consultants Group
Date Sampled: May 18, 2001
Project: N. Lilly-01

Contact: Bill Fuller
Date Received: May 18, 2001

Lab Sample ID:
L46046-01B

Field Sample ID:
NL-S-01

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Amount Detected
pH	pH units	5/22/01	9045C	0	**13.20**

Released by: _____
Laboratory Supervisor

Report Date: May 23, 2001

AMERICAN
WEST
ANALYTICAL
LABORATORIES

[illegible] West 3600 South
Salt Lake City, Utah
84115

(801) 263-8686
Toll free (888) 263-8686
Fax (801) 263-8687

INORGANIC ANALYSIS REPORT

Client: JBR Consultants Group
Date Sampled: May 18, 2001
Project: N. Lilly-01

Contact: Bill Fuller
Date Received: May 18, 2001

Lab Sample ID:
L46046-01A

Field Sample ID:
NL-S-01

TCLP METALS Method 1311

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Amount Detected
Arsenic	mg/L	5/21/01	6010B	2.0	**2.6**
Barium	mg/L	5/21/01	6010B	0.050	< 0.050
Cadmium	mg/L	5/21/01	6010B	0.030	< 0.030
Chromium	mg/L	5/21/01	6010B	0.050	< 0.050
Lead	mg/L	5/21/01	6010B	0.10	< 0.10
Mercury	mg/L	5/21/01	7470A	0.050	< 0.050
Selenium	mg/L	5/21/01	6010B	0.50	**1.0**
Silver	mg/L	5/21/01	6010B	0.10	< 0.10

Released by: _____
Laboratory Supervisor

Report Date: May 23, 2001

RUSH

American West Analytical Labs

WORK ORDER Summary

21-May-01

Work Order L46046

Client ID: JBR400
Project: N. Lilly-01
Comments: Rush Level 2

QC Level: 1 to K ET

Sample ID	Client Sample ID	Collection Date	Date Received	Date Due	Matrix	Test Code	Storage	
L46046-01A	NL-S-01	5/18/01	5/18/01	5/23/01	Solids	1311LM	tclp/rush	1
				5/23/01		3015	tclp/rush	
				5/23/01		Hg-prep-W	tclp/rush	
				5/23/01		HG-W	tclp/rush	
				5/23/01		ICP-W	tclp/rush	
L46046-01B				5/23/01		PH-S	TCLPFridge	
				5/23/01		Soil_Prep	TCLPFridge	

Faxed 5/23/01

Cli[redacted] [redacted] [redacted]

Address 8160 So. HIGHLAND DR. SUITE A4

SANDY City UTAH State 84093 Zip

Phone 801-943-4144 Fax 801-942-1852

Sampler Name STEVE ASHBY

Contact SAME

Project Name N. LILLY

Project Number/P.O.# N. LILLY - 01

AMERICAN WEST ANALYTICAL LABORATORIES
463 West 3600 South
Salt Lake City, Utah
84115
(801) 263-8686
(888) 262-8686
Fax (801) 263-8687

CHAIN OF CUSTODY

Lab Sample Set # [redacted]

Page _____ of _____

Circle One:
TAT I (II) III 5 day S
QC I II III IV

Lab ID	Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TCLP 8 RCRA METALS										COMMENTS
	NL-S-01	5-18-01 12:00	S	1	X										

LABORATORY USE ONLY

SAMPLES WERE:
1 Shipped or hand delivered
Notes:
2 Ambient or Chilled
Notes:
3 Temperature _____
4 Received Broken/Leaking (Improperly Sealed) Y N
Notes:
5 Properly Preserved Y N
Notes:
6 Received Within Holding Times Y N
Notes:

COC Tape Was:
1 Present on Outer Package Y N NA
2 Unbroken on Outer Package Y N NA
3 Present on Sample Y N NA
4 Unbroken on Sample Y N NA
Notes:

Discrepancies Between Sample Labels and COC Record? Y N
Notes:

Relinquished By: *Signature*	Date
PRINT NAME STEVE ASHBY	Time 17:55
Received By: *Signature*	Date 5/18/01
PRINT NAME KEBERH RICHARDSON	Time 17:55

Relinquished By: *Signature*	Date
PRINT NAME	Time
Received By: *Signature*	Date
PRINT NAME	Time

Relinquished By: *Signature*	Date
PRINT NAME	Time
Received By: *Signature*	Date
PRINT NAME	Time

Relinquished By: *Signature*	Date
PRINT NAME	Time
Received By: *Signature*	Date
PRINT NAME	Time

Special Instructions:

Appendix D

Draft Amended Ground Water Discharge Permit, No UGW230001

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
Don A. Ostler, P.E.
Director

288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
(801) 538-6146
(801) 538-6016 Fax
(801) 536-4414 T.D.D.
www.deq.state.ut.us Web

August 23, 2001

Mr. Stephen Flechner, President
North Lily Mining Company
Silver City Heap Leach
1800 Glenarm Place, Suite 210
Denver, Colorado 80202

Dear Mr. Flechner:

Subject: Draft Amended Ground Water Discharge Permit, No. UGW230001

Enclosed is the proposed draft amended Ground Water Discharge Permit and Statement of Basis for Permit No. UGW230001.

The permit is modified mainly to incorporate post-closure monitoring requirements. This draft permit is for your review and comment. If possible please respond within 30 days. Upon an indication of your concurrence with this draft, a final draft version of the permit will be public noticed by the Executive Secretary prior to issuance.

If you have any questions, please contact Beth Wondimu at (801) 538-6084.

Sincerely,

Dennis Frederick, P.E., Manager
Ground Water Protection Section

DAF:BW:bjr

Enclosures

U:\WQ\PERMITS\BWONDIMU\wp\NOLILY\Permit\NLcov.wpd

STATEMENT OF BASIS

DRAFT

North Lily: Silver City Heap Leach Closure
Permit Modification, No. UGW230001

August 18, 2001

Introduction

North Lily was issued a groundwater discharge permit on December 8, 1997 to cover the operation of heap leach facility closure. Due to the completion of closure of the heap leach facility, the permit is modified to incorporate new technology performance standards and requirements for post-closure monitoring.

Description of Facility

The Silver City Heap Leach facility consists of 15 acres of spent ore stacked to an average depth of 100 feet. Recovery of precious metals from the ore was terminated in October, 1995. North Lily has rinsed the ore by exposure to precipitation and by recycling drain down solutions to the heap leach. Significant reductions in initial contaminant concentrations of cyanide and other metals have been achieved.

Subsequent to the termination of operation, the facility underwent closure according to the provision of DOGM reclamation plan. The heap leach was reclaimed in December, 2000. The pad cover consists of graded and compacted subore that was ripped to a nominal depth. The top soil was seeded in accordance with Division of Oil, Gas and Mining (DOGM) reclamation requirements to establish vegetation.

Post Closure Fluid Management System

Drain-down fluid from the reclaimed heap leach is disposed of utilizing an absorption drainfield system. The absorption drainfield is installed west of the heap leach pad. The system is designed to transfer fluid from heap leach pad into a distribution box, that is located at the pad margin, and then to the absorption field. Construction standards for drainfield is covered under the construction permit issued on by the Executive Secretary April 5, 2001.

The technology performance standard to be achieved in this post operational permit is the operation and maintenance of the absorption drainfield as set forth in the approved construction permit. In addition, post closure fluid management for purposes of the permit is defined as: 1) Flow rate for heap leach draindown fluid will not exceed the design limit of 6.41 gallons per minute;
2) Concentrations of constituents of the drainown fluid must be *de minimis* for potential impact to the ground water quality in the vicinity.

Post-Closure Monitoring

The heap leach draindown fluid will be monitored for constituents listed in the permit during post-closure operation. Samples will be taken from the draindown fluid sampling port on a quarterly basis.

Flow measurement will also be conducted as part of post closure monitoring. Manual measurement of flow rate will be conducted on a weekly basis for both instantaneous and cumulative flow.

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Permit No.: UGW230001

DRAFT

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O. BOX 144870
SALT LAKE CITY, UTAH 84114-4870

Ground Water Quality Discharge Permit

In compliance with the provisions of the Utah Water Pollution Control Act, Title 19, Chapter 5, Utah Code Annotated 1953, as amended,

North Lily Mining Company
Silver City Heap Leach
1800 Glenarm Place, Suite 210
Denver, Colorado 80202

is granted an amended Ground Water Quality Discharge Permit for the Silver City Heap Leach located on a tract of land in Tintic Valley with the NE1/4; Section 35, Township 10 South Range 3 West, Salt Lake Base and Meridian, Juab Co., Utah in accordance with conditions set forth herein.

This Ground Water Quality Discharge Permit supersedes all other Ground Water Discharge permits for this facility issued previously.

This modified permit shall become effective on _____.

This permit and the authorization to operate shall expire at midnight, _____.

_____
Executive Secretary
Utah Water Quality Board

TABLE OF CONTENTS

I. SPECIFIC CONDITIONS

A. Ground Water Classification

Based on ground water data collected from a downgradient water supply well, ground water in the area of the facility is classified as Class IA Drinking Water Quality Ground Water.

B. Post Operation Discharge Minimization Technology

1. Heap Leach Pad Cover

The heap leach was reclaimed in December, 2000. The pad cover consist of graded and compacted subore that was ripped to a nominal depth. The top soil was seeded in accordance with Division of Oil, Gas and Mining (DOGM) reclamation requirements to establish vegetation. At a minimum, vegetative earthen cover must be established to a density consistent with DOGM requirements.

2. Post-Closure Fluid Management System

Drain-down fluid from the reclaimed heap leach is disposed of utilizing an absorption drainfield system. The absorption drainfield is installed at west of the heap leach pad. The system is designed to transfer fluid from heap leach pad to the absorption field. Construction standards for the absorption drainfield is covered under the construction permit issued by Executive Secretary on April 5, 2001.

3. Performance Standards

a. The absorption drainfield shall be maintained in operable condition such that effective leachate flow through and treatment is provided at all times;

b. Flow rate for heap leach draindown fluid shall not exceed the design limit, 6.41 gallons per minute.

c. Concentrations of constituents of the draindown fluid must be *de minimis* for potential impact to the ground water quality in the vicinity.

C. Post-Closure Compliance Monitoring Requirements

1. Heap Leach Draindown Fluid Monitoring

a) Monitoring Frequency - Compliance monitoring of the heap leach draindown fluid shall be conducted by the permittee quarterly. Monitoring will be reported to the Executive Secretary as per the requirements stipulated in Part I.E.1.

b) Analysis by Certified Laboratories - draindown fluid samples shall be submitted to a laboratory certified by the State Health Laboratory for analysis.

c) Analytical Methods - methods used to analyze samples must be methods cited in UAC R317-6-6.3A(13)

d) Analysis Parameters - the following analyses will be conducted on all water samples collected:

1) Field Parameters - pH, temperature, and specific conductance

2) Laboratory Parameters -

- Major Anions and Cations: including chloride, sulfate, carbonate, bicarbonate, sodium, potassium, magnesium and calcium.
- Dissolved Metals: including arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver and zinc.
- Fluoride, nitrite and nitrate.
- Weak Acid Dissociable Cyanide.
- Cyanide Amenable to Chlorination.

h) Sampling Port - samples of draindown fluid shall be taken at the distribution box that is located at the heap leach pad margin.

2. Heap Leach Draindown Fluid Flow Measurement

a) Monitoring Frequency - Manual measurement of flow rate for draindown fluid shall be conducted on a weekly basis, for both instantaneous and cumulative flow. The data will be reported on a quarterly basis in accordance with the schedule of Table 1, Part I.E.1.

b) Sampling Port - The flow measurement shall be taken manually at the distribution box that is located at the heap leach pad margin.

D. Non-Compliance Status

In the event the permittee fails to maintain the Heap Leach Pad Cover and the absorption field in compliance with any of the requirements of Part I.B.3 of this permit, the permittee shall be in violation of this permit unless the affirmative defense provisions of Part III.G are satisfied. The permittee shall submit to the Executive Secretary a notification and description of the failure in accordance with Part II I.1 and 2.

E. Reporting Requirements

a) Post closure monitoring schedule - The sampling and analysis required in Part I.C, above, shall be reported according to Table 1, below.

Table 1 - Compliance Monitoring Reporting Schedule

Quarter		Report Due On
1st	(Jan., Feb., March)	April 15
2nd	(April, May, June)	July 15
3rd	(July, Aug., Sept.)	October 15
4th	(Oct., Nov., Dec.)	January 15

b) Sampling and Analysis Report - will include:

1) Field Data Sheets - or copies thereof, including the field measurements, required in Part I C 1(c)(1), above, and other pertinent field data, such as: sample location, date and time, names of sampling crew, type of sampling pump or bail, measured casing volume, volume of water purged before sampling.

2) Results of Sample Analysis - including date sampled, date received, ion balance; and the results of analysis for each parameter, including: value or concentration, units of measurement, reporting limit (minimum detection limit for the examination), analytical method, and the date of the analysis.

3) Electronic Filing Requirements - In addition to submittal of the hard copy data, above, the permittee will be required to electronically submit the required ground water monitoring data in an electronic format approved by the Executive Secretary. The data may be sent by e-mail, floppy disc, modem or other approved transmittal mechanism.

F. Compliance Schedule

Construction Plans and Specifications - Within 30 days of issuance of this permit, the permittee shall submit As-Built plans and specifications for the recently constructed absorption draindown field.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under Part I shall be representative of the monitored activity.

B. Analytical Procedures. Water sample analysis must be conducted according to test procedures specified under UACR317-6.3.A.13, unless other test procedures have been specified in this permit.

C. Penalties for Tampering. The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

D. Reporting of Monitoring Results. Monitoring results obtained during each reporting period specified in the permit, shall be submitted to the Executive Secretary, Utah Division of Water Quality at the following address no later than the 15th day of the month following the completed reporting period:

State of Utah
Division of Water Quality
Department of Environmental Quality
P. O. Box 144870
Salt Lake City, Utah 84114-4870
Attention: Ground Water Protection Section

E. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using approved test procedures as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted. Such increased frequency shall also be indicated.

G. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements:
2. The individual(s) who performed the sampling or measurements;
3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and,
6. The results of such analyses.

H. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from

the date of the sample, measurement, report or application. This period may be extended by request of the Executive Secretary at any time.

I. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall verbally report any noncompliance with permit conditions or limits as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the Utah Department of Environmental Quality 24 hour number, (801) 538-6333, or to the Division of Water Quality, Ground Water Protection Section at (801) 538-6146, during normal business hours (8:00 am - 5:00 pm Mountain Time).

2. A written submission of any noncompliance with permit conditions or limits shall be provided to the Executive Secretary within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected; and,

   d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

   e. If necessary a proposed schedule for implementation of the Contingency Plan in accordance with Part I.D.2.

3. Written reports shall be submitted to the addresses in Part II D, Reporting of Monitoring Results.

J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours, shall be reported at the time that monitoring reports for Part II D are submitted.

K. Inspection and Entry. The permittee shall allow the Executive Secretary, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Executive Secretary of the Utah Water Quality Board of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions. The Act provides that any person who violates a permit condition implementing provisions of the Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions is subject to a fine not exceeding $25,000 per day of violation. Any person convicted under Section 19-5-115(2) of the Act a second time shall be punished by a fine not exceeding $50,000 per day. Nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Bypass of Treatment Facilities

1. Definitions:

   a. "Bypass" means the intentional diversion of heap leach solutions from any portion of the treatment system or untreated flow through the system during a partial system failure.

   b. "Severe property damage" means substantial physical damage to property, damage to treatment facilities which may cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused

by delays in production.

2. Anticipated Bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least five (5) days before the date of the bypass. The notice shall include the reason(s) for the anticipated bypass, the expected length of time treatment systems will be bypassed, and a description of the measures taken to mitigate the quantities released during the bypass. Operational records shall be submitted following the anticipated bypass detailing the quantities of materials released and the levels of relevant chemical constituents in the materials released. The permittee shall limit the time period of the bypass to the minimum amount of time necessary to affect system maintenance or repairs.

   The Executive Secretary may approve an anticipated bypass, after considering any potential effects, if the Executive Secretary determines that it will meet the three conditions listed in paragraph 5 below of this section.

3. Unanticipated Bypass - The permittee shall submit notice of an unanticipated bypass as required in Part I.D.1. The permittee shall limit the time period of the bypass to the minimum amount of time necessary to affect system maintenance or repairs.

4. Prohibition of Bypass - Bypass is prohibited and the Executive Secretary may take enforcement action against a permittee for a bypass, unless:

   a) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

   b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

   c) The permittee submitted notices as required under Part III F.3, above.

G. Affirmative Defense

In the event that a compliance action is initiated against the permittee for violation of permit conditions relating to discharge minimization technology, the permittee may affirmatively defend against that action by demonstrating the following:

1. The permittee submitted notification according to Part I.D.1 and Part II.I.1 and 2;

2. The failure was not intentional or caused by the permittee's negligence, either in action or in failure to act;

3. The permittee has taken adequate measures to meet permit conditions in a timely manner or has submitted to the Executive Secretary, for the Executive Secretary's approval, an adequate plan and schedule for meeting permit conditions; and

4. The provisions of 19-5-107 have not been violated.

IV. GENERAL REQUIREMENTS

A. Planned Changes. The permittee shall give notice to the Executive Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required when the alteration or addition could significantly change the nature of the facility or increase the quantity of pollutants discharged.

B. Anticipated Noncompliance. The permittee shall give advance notice of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Spill Reporting - The Permittee shall immediately report as per UCA 19-5-114 of the Utah Water Quality Act any spill or leakage from the tailings impoundment or associated facilities which is not totally contained by a collection system. This report shall be made to the phone numbers given in Part II I 1. A written report will be required within 5 days of the occurrence and should address the requirements of UCA 19-5-114 and Part II I 2 and 3 of this permit.

D. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

E. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a permit renewal or extension. The application should be submitted at least 180 days before the expiration date of this permit.

F. Duty to Provide Information. The permittee shall furnish to the Executive Secretary, within a reasonable time, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Executive Secretary, upon request, copies of records required to be kept by this permit.

G. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Executive Secretary, it shall promptly submit such facts or information.

H. Signatory Requirements. All applications, reports or information submitted to the Executive Secretary shall be signed and certified.

1. All permit applications shall be signed as follows:

   a. For a corporation: by a responsible corporate officer;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Executive Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to the Executive Secretary, and,

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to Authorization. If an authorization under Part IV H 2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part IV H 2. must be submitted to the Executive Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Penalties for Falsification of Reports. The Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

J. Availability of Reports. Except for data determined to be confidential by the permittee, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Executive Secretary. As required by the Act, permit applications, permits, effluent data, and ground water quality data shall not be considered confidential.

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

M. Transfers. This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Executive Secretary at least 30 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

3. The Executive Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement as described in Part IV.M.2, above.

N. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, penalties established pursuant to any applicable state law or regulation under authority preserved by Section 19-5-117 of the Act.

O. Reopener Provisions. This permit may be reopened and modified pursuant to R317-6-6.6.B or R317-6-6.10.C to include the appropriate limitations and compliance schedule, if necessary.

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Appendix E

Utah Underground Injection Control Program Inventory Information

MAIL TO:

Division of Water Quality
P.O. Box 144870
Utah 84114 - 4870

Well Class:_____
Department of Environmental Quality
Inventory
ID No.:_
Risk Hyd ._____ Chem._____
Date Entered:__/__/____ By_____ Salt Lake City,
(leave this block blank)

UTAH UNDERGROUND INJECTION CONTROL PROGRAM
INVENTORY INFORMATION

General Facility and Injection Well Information

Please provide the information requested below This form is to be submitted by the owner or operator of a facility having one or more injection wells. Please type or print (ink). If you have any questions, call 801-538-6146.

1. Facility Information.

A. Facility Name: Silver City, Utah Heap Leach Phone No.: N/A

B. Local Address: N/A (Closed Facility) See Item D Below
(Number & Street, Route, City, Zip Code)

C. Mail Address: 1800 Glen Arm Place, Suite 210
Denver Colorado 80202
(If Different than Above; Number & Street, Box and/or Route, City, State, Zip Code)

D. Facility Location* County: Juab
T. 10 S , R. 3 W , Sec. 35 , NE ¼ of NE ¼,
Lat. 39 ° 54 ′ 55 "N, Long. 112 ° 08 ′ 27 "W
*Note: A topographic mapor detailed aerial photograph should be used to locate the facility or well.

2. Well Owner/Operator/Legal Contact Information.

A. Owner
1. Name: North Lily Mining Company Phone No.: (303) 294-0427
2. Mail Address 1800 Glen Arm Place, Suite 210
Denver Colorado 80202
(Number & Street, Box &/or Route, City, State, Zip Code)

B. Operator (if different than Owner above)
1. Name:_____ Phone No.:(__)_____
2. Mail Address_____
(Number & Street, Box &/or Route, City, State, Zip Code)

C. Legal Contact
Name: Mr. Gene Webb Phone No:(303)294-0427
Title: Executive Vice President
Mail Address: 1800 Glen Arm Place, Suite 210
Denver Colorado 80202
(Number & Street, Box and/or Route, City, State, Zip Code)
Organization:_____

3. Type of Facility (check one)

[X] Private [ ] Public (State or Local) [ ] Indian [ ] Federal

[ ] Other, please describe:_____

(Continued on back)

4. Injection Well Status (indicate number of wells in the appropriate categories):
[X] Active
[ ] Temporarily Abandoned [ ] Proposed
[ ] Permanently Abandoned [ ] Under Construction/Modification

5. SIC Codes: 104
Enter Principal 3 Digit Code Numbers Used in Census & Other Government Reports

6. Construction Details. Enter requested information for each well noted in 4 above (use additional forms as needed). If all wells use the same construction methods please note. If data is not available enter NAV. If category is not applicable enter NAP. Enter proposed details if wells are not yet constructed. Well diagram may be substituted.

A.	Well Identification No./Name	North Lily Drain Field
B.	Well Depth	Trench depth @ approx.5980 feet
C.	Casing Type For drywells Duracrete etc.	White PVC
D.	Casing Diameter	4"
E.	Grout Type	N/A
F.	Screened Interval	2750' of horizontal screened PVC
G.	Water Elevation Indicate if Artesian	From two wells in the area the static water depth is 5,575'. The depth to water is 400' to 410'.
H.	Well Elevation	The topographic elevations range from approximately 5985' to 6010'
I.	Injection Pressure	The drain field will be gravity fed.

7. Initial Date of Injection: May 8, 2001

8. Injection Fluid Description: Heap Leach drain and water run-off water.

9. Injection Fluid Source: Heap Leach

10. Annual Volume Injected (gallons) 1,576,800 to 3,153,600 (depending on annual precipitation)

11. Comments:

The information below should be provided by the person filling out the form:

(801) 943-4144
PHONE NO. (area code & no.)

NAME & OFFICIAL TITLE (type or print)
James R. Sage III
Environmental Analyst / Geologist

SIGNATURE

DATE SIGNED

UICFORM.009

N-lily-01 (RCFMS)

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

Michael O. Leavitt
Governor

Dianne R. Nielson, Ph.D.
Executive Director

Don A. Ostler, P.E.
Director

288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
(801) 538-6146
(801) 538-6016 Fax
(801) 536-4414 T.D.D.
www.deq.state.ut.us Web

Done 4/19/01
RJB

April 13, 2001

Mr. Robert J. Bayer, RPG
Vice President
JBR Environmental Consultants, inc.
8160 South Highland Drive, Suite A-4
Sandy, Utah 84093

Dear Mr. Bayer:

SUBJECT: CUSTOMER SURVEY

On April 5, 2001, the Utah Water Quality Board issued a construction permit for the construction of a subsurface disposal system for the post closure fluid management.

Please take a moment to complete the enclosed, pre-addressed and postage-paid questionnaire. Your feedback is very important to us, to streamline and improve the approval process and to meet your needs effectively.

I sincerely appreciate and thank you for the time taken to respond and return this questionnaire.

Best regards,

Kirah L. Bhayani, P.E., D.EE.
Manager, Design Evaluation Section

Enclosure

KLB:

NORTH LILY SUBSURFACE SYSTEM JBR 04122001
23:28-12APR2001/KLB
FILE: NORTH LILY MINING COMPANY

Appendix F

Class IIIb Industrial Landfill Permit by Rule and Recorders Office Document

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF SOLID AND HAZARDOUS WASTE

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
Dennis R. Downs
Director

288 North 1460 West
P.O. Box 144880
Salt Lake City, Utah 84114-4880
(801) 538-6170
(801) 538-6715 Fax
(801) 536-4414 T.D.D.
www.deq.state.ut.us Web

May 7, 2001

Robert J. Bayer, Managing Principal
JBR Environmental Consultants, Inc.
8160 South Highland Drive
Sandy, Utah 84093

Subject: North Lily's Silver City Heap Leach Facility Reclamation - Industrial Solid Waste Landfill, Juab County

Dear Mr. Bayer:

The application for a Permit by Rule for a Class IIIb Landfill at the North Lily Mining Company's Silver City Heap Leach Facility located in the SW1/4, NE1/4, NE1/4, of Section 35 Township 10 South, Range 3 West, Salt Lake Base and Meridian, Juab County has been reviewed.

It is determined that the waste disposed at the solid waste disposal site will be nonhazardous industrial waste and that the closure and reclamation activities at the site will be as stringent as the requirements for an Industrial Solid Waste Landfill specified in Utah Administrative Code (UAC) R315-304-5(2)(b). Also, the reclamation bond required by the Division of Oil, Gas, and Mining includes the closure and reclamation of the solid waste disposal site.

Therefore, the solid waste disposal site at the North Lily Mining Company's Silver City Heap Leach Facility meets the requirements of UAC R315-318 and is hereby permitted by rule under the condition that the requirements of UAC R315-302-2(6) are met. This requirement specifies that the owner or operator of a solid waste disposal facility shall, within 60 days of closure, make a change in the record of title that the property has been used as a solid waste disposal site and submit proof of the record of title filing to the Executive Secretary.

If you have questions or need further information on this matter, please contact Ralph Bohn or Carl Wadsworth at 801-538-6170.

Sincerely,

Dennis R. Downs, Executive Secretary
Utah Solid and Hazardous Waste Control Board

DRD/CEW/kk

c: Wayne Hedburg, Division of Oil, Gas, and Mining
Larry Mize, Division of Water Quality
Robert Resendes, M.B.A., M.T., Director, Central Utah Public Health Department
Roger Foisy, DEQ District Engineer

f:\shw\spb\cwadswor\wp\nrth-lily.pmt
File: North Lily Mining Company

RECEIVED JUL 12 2001

00224218 Bk 0424 Pg 0875
CRAIG J. SPERRY, JUAB COUNTY RECORDER
2001 JUL 06 13:42 PM FEE $11.00 BY DPZ
FOR: JBR ENVIRONMENTAL CONSULTANTS, INC.

jbr environmental consultants, inc.

8160 South Highland Drive • Sandy, Utah 84093 • (801) 943-4144 • Fax (801) 942-1852

06/26/01

Juab County Recorders Office
160 North Main Street
Nephi, Utah 84648

RE: Class IIIb Industrial Landfill in Juab County, Utah

To whom it may concern:

This is a notification of a recently installed and closed Class IIIb Industrial Landfill in Juab County , Utah under the supervision of JBR Environmental Consultants, Inc. for the North Lily Mining Company Denver, Colorado. The State of Utah Division of Environmental Quality, Division of Solid and Hazardous Waste approved the landfill by a Permit by Rule in a letter sent on May 7, 2001 by Dennis R. Downs, Executive Secretary, Utah Solid and Hazardous Waste Control Board (~~see attached letter~~). VS

Location:

T. 10 S. R. 3 W. Section 35 SW ¼ of NE ¼ of NE ¼

T. 10 S. R. 3 W. Section 35 NW ¼ of SE ¼ of NE ¼

James R Sage
Geologist/Environmental Technician

Robert J Bayer
Principal

Norma Stokes
Notary

NORMA STOKES
NOTARY PUBLIC - STATE of UTAH
8160 SOUTH HIGHLAND DR.
SANDY, UT 84093
COMM EXPIRES 7-26-2001

~~Attachment~~ VS

Appendix G

Heap Drainage Water Quality Data

CHEMTECH-FORD ANALYTICAL LABORATORIES

Date: 1/17/02

JBR Consultants
attn. Jim Sage
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

AMENDED REPORT

Project: N LILY-01

Project Group No. 50781
Date Sample(s) Submitted: 11/27/01

This is the final report for project 50781 and contains 3 pages of information in addition to attachments. Individual pages or sections of this report may not be separated when using the information for regulatory compliance.

The analyses presented on this report were performed in accordance with National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

Please feel free to contact us at (801) 262-7299 or (801) 262-7378 (fax) if you have questions or comments regarding this report.

Dave Gayer
Laboratory Director
dave@chemtechford.com

Linda Daniels
Customer Representative

Approved By: Dave Gayer, Laboratory Director

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

CHEMTECH-FORD ANALYTICAL LABORATORIES

Lab No: 01-U011383
Report Date: 1/17/02

JBR Consultants
attn. Jim Sage
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

CERTIFICATE OF ANALYSIS

Sample Description: MW- 11/27/01
Project: N LILY-01
Sample Matrix: WASTE WATER
Lab Group No: 50781
Date/Time Sampled: 11/27/01 , 12:00
Date/Time Received: 11/27/01 , 16:45
Sample Note(s):

Sample received on ice.

PARAMETER / UNITS	RESULT	MRL	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Alkalinity,as Bicarbonate, mg/L	350	1	11/29/01 14:45	SM 2320B	CSM
Alkalinity, as Carbonate, mg/L	< 1	1	11/29/01 14:45	SM 2320B	CSM
Chemical Oxygen Demand, mg/L	350	10	12/ 4/01 16:00	HACH 8000	CSM
Chloride, mg/L	1,900	10	12/10/01 17:00	EPA 300.0	CSM
Conductance, Specific, umhos/cm	21,000	1	12/13/01 9:00	EPA 120.1	TAH
Cyanide, Amenable to Cl2, mg/L	2.8	0.008	12/ 7/01 15:00	ASTM D2036	TC
Cyanide, Total, mg/L	3.1	0.1	12/ 3/01 15:00	ASTM D2036	TC
Cyanide, WAD, mg/L	0.42	0.01	12/ 3/01 15:00	ASTM D2036	TC
Fluoride, mg/L	3.2	0.1	12/ 7/01 12:43	EPA 300.0	CSM
Nitrate, Nitrogen (Calc.), mg/L	310	40	12/ 4/01 14:00	EPA 353.1	TSM
Nitrite, Nitrogen, mg/L	130	6.2	11/27/01 17:00	EPA 354.1	TSM
pH, units	7.6	0.1	12/14/01 14:20	EPA 150.1	EJB
Sulfate, mg/L	8,000	50	12/13/01 18:00	EPA 300.0	CSM
Barium (T), as Ba, mg/L	0.012	0.005	12/ 6/01 12:32	EPA 200.7	MJB
Calcium (T), as Ca, mg/L	410	0.2	12/ 6/01 12:32	EPA 200.7	MJB
Chromium (T), as Cr, mg/L	< 0.005	0.005	12/ 6/01 12:32	EPA 200.7	MJB
Copper (T), as Cu, mg/L	2.6	0.01	12/ 6/01 12:32	EPA 200.7	MJB
Magnesium (T), as Mg, mg/L	53	0.2	12/ 6/01 12:32	EPA 200.7	MJB
Potassium (T), as K, mg/L	220	0.2	12/ 6/01 12:32	EPA 200.7	MJB
Sodium (T), as Na, mg/L	4,900	4	1/14/02 10:23	EPA 200.7	MJB
Zinc (T), as Zn, mg/L	2.2	0.01	12/ 6/01 12:32	EPA 200.7	MJB
Arsenic (T), as As, mg/L	0.17	0.0005	12/11/01 13:32	EPA 200.8	JJT
Cadmium (T), as Cd, mg/L	0.021	0.0005	12/11/01 13:32	EPA 200.8	JJT
Lead (T), as Pb, mg/L	0.18	0.005	12/11/01 13:32	EPA 200.8	JJT
Mercury (T), as Hg, mg/L	0.0060	0.0002	12/11/01 13:32	EPA 200.8	JJT
Selenium (T), as Se, mg/L	0.20	0.0005	12/11/01 13:32	EPA 200.8	JJT

MRL - Minimum Reporting Limit

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

CHEMTECH-FORD ANALYTICAL LABORATORIES

Lab No: 01-U011383
Report Date: 1/17/02

JBR Consultants
attn. Jim Sage
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

CERTIFICATE OF ANALYSIS

Sample Description: MW- 11/27/01
Project: N LILY-01
Sample Matrix: WASTE WATER
Lab Group No: 50781
Date/Time Sampled: 11/27/01 , 12:00
Date/Time Received: 11/27/01 , 16:45
Sample Note(s):
Sample received on ice.

PARAMETER / UNITS	RESULT	MRL	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Silver (T), as Ag, mg/L	0.069	0.0005	12/11/01 13:32	EPA 200.8	JJT
Temperature, Receiving, C	1.0		11/27/01 16:45		SPS

MRL = Minimum Reporting Limit

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Lab No: 01-U008033
Report Date: 9/25/01

JBR Consultants
attn. Jim Sage
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

CERTIFICATE OF ANALYSIS

Sample Description: N Lily Dist. Box
Project: NLILY-01
Sample Matrix: WASTE WATER
Lab Group No: 48432
Date/Time Sampled: 8/28/01 , 11:30
Date/Time Received: 8/28/01 , 13:05
Sample Note(s):

Sample received on ice.

PARAMETER / UNITS	RESULT	MRL	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Alkalinity,as Bicarbonate, mg/L	360	1	9/ 6/01 8:30	SM 2320B	CSM
Alkalinity, as Carbonate, mg/L	< 1	1	9/ 6/01 8:30	SM 2320B	CSM
Chemical Oxygen Demand, mg/L	490	10	9/ 6/01 10:45	HACH 8000	CSM
Chloride, mg/L	1,900	0.5	8/30/01 17:00	EPA 300.0	CSM
Conductance, Specific, umhos/cm	19,000	1	9/ 6/01 9:00	EPA 120.1	MJB
Cyanide, Amenable to Cl2, mg/L	4.3	0.032	9/19/01 15:00	ASTM D2036	TC
Cyanide, Total, mg/L	4.4	0.4	8/30/01 16:30	ASTM D2036	TC
Cyanide, WAD, mg/L	0.52	0.032	9/ 5/01 15:00	ASTM D2036	TC
Fluoride, mg/L	3.2	0.5	8/30/01 17:00	EPA 300.0	CSM
Mercury, as Hg Total, mg/L	0.015	0.0002	9/ 5/01 14:45	EPA 245.2	MJB
Nitrate, Nitrogen, mg/L	280	0.1	8/30/01 17:00	EPA 300.0	CSM
Nitrite, Nitrogen, mg/L	81	0.05	8/30/01 17:00	EPA 300.0	CSM
pH, units	7.8	0.1	8/28/01 10:00	EPA 150.1	EJB
Sulfate, mg/L	7,800	1	8/30/01 17:00	EPA 300.0	CSM
Barium (T), as Ba, mg/L	0.015	0.005	8/30/01 13:08	EPA 200.7	MJB
Calcium (T), as Ca, mg/L	400	0.2	8/30/01 13:08	EPA 200.7	MJB
Chromium (T), as Cr, mg/L	< 0.005	0.005	8/30/01 13:08	EPA 200.7	MJB
Copper (T), as Cu, mg/L	3.1	0.01	8/30/01 13:08	EPA 200.7	MJB
Magnesium (T), as Mg, mg/L	48	0.2	8/30/01 13:08	EPA 200.7	MJB
Potassium (T), as K, mg/L	240	0.2	8/30/01 13:08	EPA 200.7	MJB
Sodium (T), as Na, mg/L	510	20	8/31/01 11:02	EPA 200.7	MJB
Zinc (T), as Zn, mg/L	1.4	0.01	8/30/01 13:08	EPA 200.7	MJB
Arsenic (T), as As, mg/L	0.14	0.0005	9/ 5/01 14:18	EPA 200.8	JJT
Cadmium (T), as Cd, mg/L	0.0097	0.0005	9/ 5/01 14:18	EPA 200.8	JJT
Lead (T), as Pb, mg/L	0.085	0.005	9/ 5/01 14:18	EPA 200.8	JJT
Selenium (T), as Se, mg/L	0.12	0.0005	9/ 5/01 14:18	EPA 200.8	JJT

L = Minimum Reporting Limit

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Lab No: 01-U008033
Report Date: 9/25/01

JBR Consultants
attn. Jim Sage
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

CERTIFICATE OF ANALYSIS

Sample Description: N Lily Dist. Box
Project: NLILY-01
Sample Matrix: WASTE WATER
Lab Group No: 48432
Date/Time Sampled: 8/28/01 , 11:30
Date/Time Received: 8/28/01 , 13:05
Sample Note(s):

Sample received on ice.

PARAMETER / UNITS	RESULT	MRL	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Silver (T), as Ag, mg/L	0.080	0.0005	9/ 5/01 14:18	EPA 200.8	JJT
Temperature, Receiving, C	1.3		8/28/01 13:05		SPS

L = Minimum Reporting Limit

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 5/10/01

To: JBR Consultants
attn. Rich Pratt
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

Group #: 45202
Lab #: 01-U003516
Project: N LILY -01
Sample Desc: Preg Pond
Sample Matrix: WASTE WATER
Date/Time Sampled: 4/19/01 , 9:30
Date/Time Received: 4/19/01 , 11:40

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Alkalinity,as Bicarbonate, mg/L	280	1	4/25/01 11:45	SM 2320B	CSM
Alkalinity, as Carbonate, mg/L	< 1	1	4/25/01 11:45	SM 2320B	CSM
Chloride, mg/L	2,100	50	4/23/01 10:45	EPA 325.3	CSM
Conductance, Specific, umhos/cm	22,000	1	4/26/01 10:35	EPA 120.1	TAH
Cyanide, Amenable to Cl2, mg/L	16	0.002	4/24/01 14:00	ASTM D2036	PNM
Cyanide, Total, mg/L	16	1	4/24/01 14:00	ASTM D2036	PNM
Cyanide, WAD, mg/L	12	3.2	4/24/01 14:00	ASTM D2036	PNM
Fluoride, mg/L	5.6	0.5	4/22/01 18:00	EPA 340.2	TSM
Mercury, as Hg Total, mg/L	0.019	0.0002	4/27/01 11:15	EPA 245.2	MJB
Nitrite, Nitrogen, mg/L	57	2.5	4/19/01 15:15	EPA 354.1	TSM
Nitrate+Nitrite-Total, mg/L	160	50	4/30/01 10:00	EPA 353.1	PNM
pH, units	8.2	0.1	4/19/01 15:00	EPA 150.1	CSM
Sulfate, mg/L	11,000	2000	4/23/01 14:00	EPA 375.4	TSM
Barium (T), as Ba, mg/L	0.045	0.005	4/26/01 15:57	EPA 200.7	MJB
Calcium (T), as Ca, mg/L	280	0.2	4/26/01 15:57	EPA 200.7	MJB

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 5/10/01

To: JBR Consultants
attn. Rich Pratt
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

Group #: 45202
Lab #: 01-U003516
Project: N LILY -01
Sample Desc: Preg Pond
Sample Matrix: WASTE WATER
Date/Time Sampled: 4/19/01 , 9:30
Date/Time Received: 4/19/01 , 11:40

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Chromium(T), as Cr, mg/L	< 0.005	0.005	4/26/01 15:57	EPA 200.7	MJB
Copper (T), as Cu, mg/L	15	0.01	4/26/01 15:57	EPA 200.7	MJB
Magnesium (T), as Mg, mg/L	110	0.2	4/26/01 15:57	EPA 200.7	MJB
Potassium (T), as K, mg/L	260	0.2	4/26/01 15:57	EPA 200.7	MJB
Sodium (T), as Na, mg/L	5,100	20	5/ 8/01 12:08	EPA 200.7	MJB
Zinc (T), as Zn, mg/L	0.48	0.01	4/26/01 15:57	EPA 200.7	MJB
Arsenic (T), as As, mg/L	0.17	0.005	5/ 7/01 17:43	EPA 200.8	JJT
Cadmium (T), as Cd, mg/L	0.006	0.005	5/ 7/01 17:43	EPA 200.8	JJT
Lead (T), as Pb, mg/L	0.20	0.05	5/ 7/01 17:43	EPA 200.8	JJT
Selenium (T), as Se, mg/L	0.15	0.005	5/ 7/01 17:43	EPA 200.8	JJT
Silver (T), as Ag, mg/L	0.64	0.005	5/ 7/01 17:43	EPA 200.8	JJT
Temperature, Receiving, c	17		4/19/01 11:40		SPS

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Date: 5/10/01

To: JBR Consultants
attn. Rich Pratt
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

Group #: 45202
Lab #: 01-U003516
Project: N LILY -01
Sample Desc: Preg Pond
Sample Matrix: WASTE WATER
Date/Time Sampled: 4/19/01 , 9:30
Date/Time Received: 4/19/01 , 11:40

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					

NOTE: Sample not received on ice.

Approved By: David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

CHEMTECH-FORD ANALYTICAL LABORATORIES

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007946
Project: SILVER PEAK
Sample Desc: Heap Leach Outfall
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 , 14:00
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Alkalinity,as Bicarbonate, mg/L	388	1	8/25/00 12:00	SM 2320B	TSM
Alkalinity, as Carbonate, mg/L	< 1	1	8/25/00 12:00	SM 2320B	TSM
Chloride, mg/L	2,220	10	8/30/00 14:00	EPA 325.3	TSM
Conductance, Specific, umhos/cm	23,300	1	8/31/00 10:15	EPA 120.1	MJB
Cyanide, Amenable to Cl2, mg/L	18.8	0.002	9/ 1/00 13:00	ASTM D2036	PNM
Cyanide, Total, mg/L	19	1	9/ 1/00 13:00	ASTM D2036	PNM
Cyanide, WAD, mg/L	14.4	0.457	9/ 8/00 8:00	ASTM D2036	PNM
Fluoride, mg/L	6.7	0.2	9/ 7/00 10:00	EPA 340.2	TSM
Mercury, as Hg (D), mg/L	< 0.0002	0.0002	8/28/00 12:40	EPA 245.2	MJB
Nitrite, Nitrogen, mg/L	51	1.25	8/23/00 12:45	EPA 354.1	TSM
Nitrate+Nitrite-Total, mg/L	145	10	8/31/00 15:00	EPA 353.1	EJB
pH, units	8.1	0.1	8/23/00 12:30	EPA 150.1	LPS
Sulfate, mg/L	10,200	2000	8/29/00 16:00	EPA 375.4	TSM
Total Dissolved Solids, mg/L	20,000	25	8/24/00 12:30	EPA 160.1	LPS
Barium (D), as Ba, mg/L	0.010	0.005	8/29/00 15:19	EPA 200.7	JJT

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

{generic.rpt}

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

CHEMTECH-FORD ANALYTICAL LABORATORIES

Date: 9/22/00

To: JBR Consultants
attn. Scott Page
8160 South Highland Drive, Ste. A-4
Sandy, UT 84088

Group #: 39788
Lab #: 00-U007946
Project: SILVER PEAK
Sample Desc: Heap Leach Outfall
Sample Matrix: WASTE WATER
Date/Time Sampled: 8/22/00 , 14:00
Date/Time Received: 8/23/00 , 10:15

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING LIMIT (MRL)	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Calcium (T), as Ca, mg/L	350	0.2	8/29/00 15:19	EPA 200.7	JJT
Chromium (D), as Cr, mg/L	< 0.005	0.005	8/29/00 15:19	EPA 200.7	JJT
Copper (D), as Cu, mg/L	19	0.01	8/29/00 15:19	EPA 200.7	JJT
Magnesium (T), as Mg, mg/L	29	0.2	8/29/00 15:19	EPA 200.7	JJT
Potassium (T), as K, mg/L	310	0.2	8/29/00 15:19	EPA 200.7	JJT
Sodium (T), as Na, mg/L	5,600	20	9/ 5/00 16:25	EPA 200.7	JJT
Zinc (D), as Zn, mg/L	0.42	0.01	8/29/00 15:19	EPA 200.7	JJT
Arsenic (D), as As, mg/L	0.2464	0.0005	9/ 6/00 14:16	EPA 200.8	JJT
Cadmium (D), as Cd, mg/L	0.0076	0.0005	9/ 6/00 14:16	EPA 200.8	JJT
Lead (D), as Pb, mg/L	0.1581	0.0005	9/ 6/00 14:16	EPA 200.8	JJT
Selenium (D), as Se, mg/L	0.2707	0.0005	9/ 6/00 14:16	EPA 200.8	JJT
Silver (D), as Ag, mg/L	0.3147	0.0005	9/ 6/00 14:16	200.2/200.8	JJT
Temperature, Receiving, C	18.0		8/23/00 10:15		CSM

Approved By: David Gayer
David Gayer, Laboratory Director

MRL = Report detection limit

(generic.rpt)

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

2000

UTAH STATE DEPARTMENT OF HEALTH
DIVISION OF LABORATORY SERVICES
Environmental Chemistry Analysis Report

UDEQ - DWQ
ARNE HULTQUIST
288 N 1460 W
PO BOX 144870
SALT LAKE CITY UT 84114-4870 801-538-6146

Lab Number: . 200002437 Sample Type: 04 Cost Code: 352
Description: NORTH LILY FLOW FROM HEAP LEACH INTO POND

Site ID:	599712	Source No:	02
Sample Date:	04/04/00	Time:	10:00

Organic Review:
Inorganic Review: 07/10/00
Radiochemistry Review:
Microbiology Review:

Tot. Cations:	6297 mg/l	272.7 me/l
Tot. Anions:	6797 mg/l	157.9 me/l
Grand Total:	13094 mg/l	%D = 26.7

TEST RESULTS:

L-pH	8.68	T.Sus.Sol	9.0 mg/l
NO2+NO3, N	2110.0 mg/l	Cyanide	35.0 mg/l
D-Arsenic	76.0 ug/l	D-Barium	<5.0 ug/l
D-Cadmium	<1.0 ug/l	D-Calcium	481 mg/l
D-Chromium	<5.0 ug/l	D-Copper	332.0 ug/l
D-Iron	<20.0 ug/l	D-Lead	9.0 ug/l
D-Magnesum	23.4 mg/l	D-Mangan	11.0 ug/l
D-Potassum	293 mg/l	D-Selenium	14.0 ug/l
D-Silver	29.0 ug/l	D-Sodium	5500.0 mg/l
D-Zinc	<30.0 ug/l	Bicarbnate	248 mg/l
Carb. Diox	1 mg/l	Carbonate	0 mg/l
Chloride	2025 mg/l	Hydroxide	0 mg/l
Sulfate	4650.0 mg/l	Tot. Alk.	203 mg/l
T. Hardns.	1296.4 mg/l	Turbidity	0.235 NTU
L-Sp. Cond	22000 umhos	TDS @ 180C	18358 mg/l
D-Aluminum	<30.0 ug/l	Cyan. (Cl)	34.87 mg/l
D-Mercury	89.1 ug/l	CO3 Solids	122 mg/l

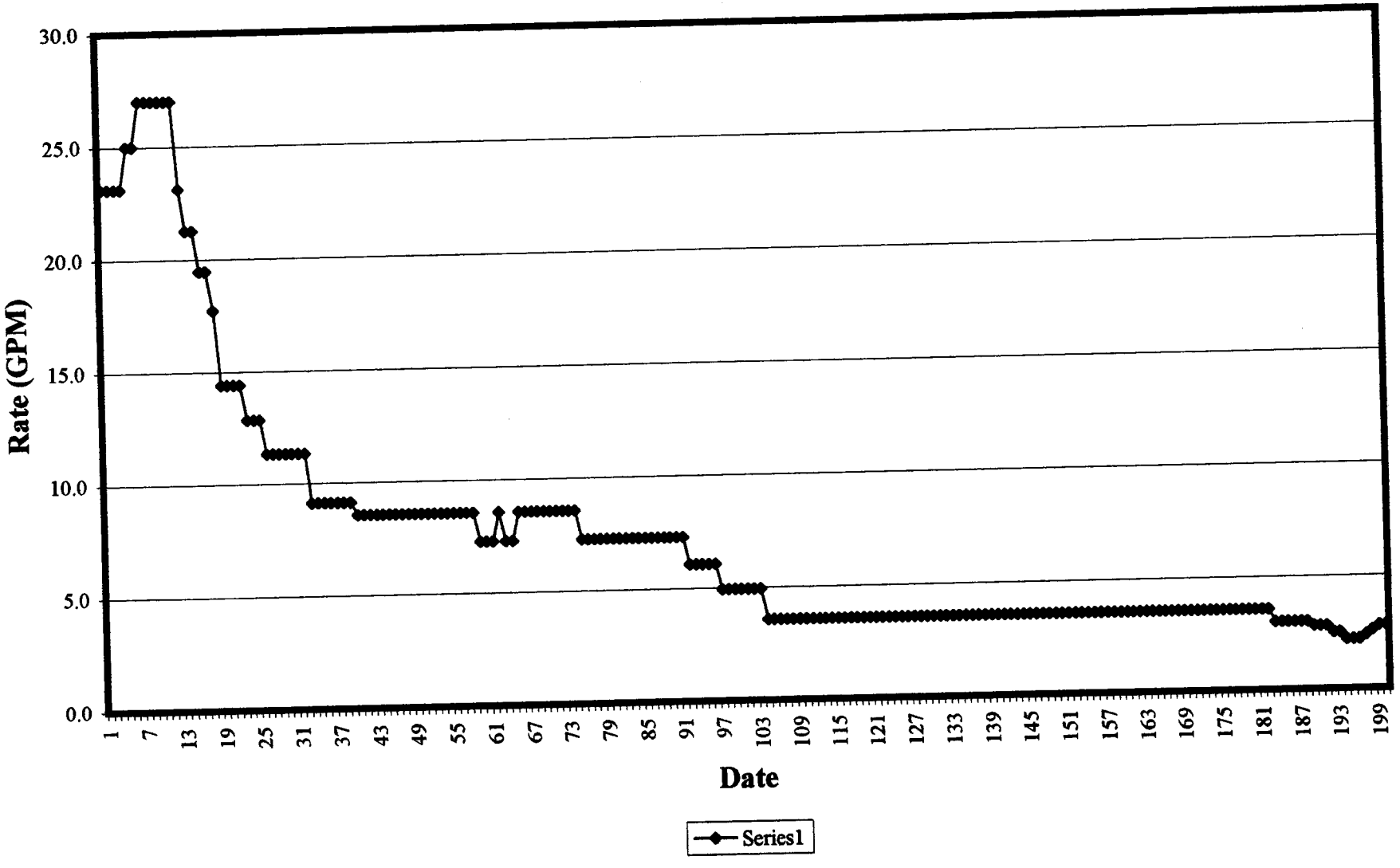
QUALIFYING COMMENTS (*) on test results: NO COMMENTS

END OF REPORT

Appendix H

Heap Drainage Water Quantity Data

Heap Leach Pad Discharge



North Lily Mining Company

EVAPORATION SYSTEM/LEACH FIELD GALLERY

Date	Daily Average (GPM)	Application Stie	Return Rate (Feet)	ReturnRate (GPM)	Amount Pumped From Preg Pond
July 3, 2000	100	N/A	N/A		
July 4, 2000	100	N/A	N/A		
July 5, 2000	100	N/A	N/A		270
July 6, 2000	100	N/A	N/A		
July 7, 2000	100	N/A	N/A		
July 10, 2000	95	N/A	N/A		
July 11, 2000	95	N/A	N/A		
July 12, 2000	90	N/A	N/A		260
July 13, 2000	90	N/A	N/A		
July 14, 2000	95	N/A	N/A		
July 15, 2000	225	N/A	N/A		
July 17, 2000	N/A	Recycle into Preg	N/A		
July 18, 2000	220	N/A	N/A		
July 19, 2000	220	N/A	N/A		250
July 20, 2000	220	N/A	N/A		
July 21, 2000	220	N/A	N/A		
July 24, 2000	N/A	Recycle into Preg	N/A		
July 25, 2000	N/A	Recycle into Preg	N/A		280
July 26, 2000	300	Pad and Preg	N/A		
July 27, 2000	300	Pad and Preg	N/A		
July 28, 2000	300	Pad and Preg	N/A		
July 30, 2000	N/A	Recycle into Preg	0.24		
July 31, 2000	N/A	Overflow	0.24		
August 1, 2000	N/A	Overflow	0.24		270
August 2, 2000	N/A	Overflow	0.22		
August 3, 2000	N/A	Overflow	0.22		
August 6, 2000	N/A	Rec	N/A		
August 7, 2000	N/A	Rec	N/A		300
August 8, 2000	360	Pad and Preg	N/A		
August 9, 2000	360	Pad and Preg	N/A		
August 10, 2000	360	Pad and Preg	N/A		200
August 11, 2000	360	Pad and Preg	N/A		
August 12, 2000	360	Pad and Preg	N/A		
August 13, 2000	360	Rec	0.19	23.1	
August 14, 2000	360	Rec	0.19	23.1	
August 15, 2000	360	Rec	0.19	23.1	
August 16, 2000	360	Rec	0.19	23.1	490
August 17, 2000	360	Rec	0.2	25.0	
August 18, 2000	360	Rec	0.2	25.0	
August 19, 2000	360	Rec	0.21	27.0	
August 20, 2000	340	Rec	0.21	27.0	
August 21, 2000	340	Rec	0.21	27.0	
August 22, 2000	340	Rec	0.21	27.0	
August 23, 2000	340	Rec	0.21	27.0	

KEY
N/R = Not Recorded
N/A = Not Avaliable

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North Lily Mining Company

EVAPORATION SYSTEM/LEACH FIELD GALLERY

August 24, 2000	340	Rec	0.21	27.0	500
August 27, 2000	350	Preg and Overflow	0.19	23.1	
August 28, 2000	220	Preg and Overflow	0.18	21.3	
August 29, 2000	220	Preg and Overflow	0.18	21.3	
August 30, 2000	340	Preg and Overflow	0.17	19.5	
August 31, 2000	200	Preg and Overflow	0.17	19.5	475
September 1, 2000	210	Preg and Overflow	0.16	17.7	
September 5, 2000	N/A	Recycle to preg pond	0.14	14.4	
September 6, 2000	N/A	Recycle to preg pond	0.14	14.4	
September 7, 2000	N/A	Recycle to preg pond	0.14	14.4	500
September 8, 2000	N/A	Recycle to preg pond	0.14	14.4	
September 9, 2000	N/A	Recycle to preg pond	0.13	12.8	
September 10, 2000	N/A	Recycle to preg pond	0.13	12.8	
September 11, 2000	N/A	Overflow Ponds	0.13	12.8	
September 12, 2000	N/A	Overflow Ponds	0.12	11.3	
September 13, 2000	N/A	Overflow Ponds	0.12	11.3	480
September 14, 2000	N/A	Overflow Ponds	0.12	11.3	
September 15, 2000	N/A	Overflow Ponds	0.12	11.3	
September 16, 2000	N/A	Overflow Ponds	0.12	11.3	
September 18, 2000	N/A	Recycle to preg pond	0.12	11.3	
September 19, 2000	N/A	Recycle to preg pond	0.12	11.3	
September 20, 2000	N/A	Recycle to preg pond	0.11	9.1	490
September 21, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 22, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 23, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 25, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 26, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 27, 2000	N/A	Recycle to preg pond	0.11	9.1	475
September 28, 2000	N/A	Recycle to preg pond	0.10	8.6	
September 29, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 2, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 3, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 4, 2000	N/A	Recycle to preg pond	0.10	8.6	469
October 5, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 6, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 9, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 10, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 11, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 12, 2000	N/A	Recycle to preg pond	0.10	8.6	490
October 13, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 16, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 17, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 18, 2000	N/A	Recycle to preg pond	0.10	8.6	480
October 19, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 20, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 23, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 24, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 25, 2000	N/A	Recycle to preg pond	0.09	7.3	440

KEY

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North Lily Mining Company

EVAPORATION SYSTEM/LEACH FIELD GALLERY

October 26, 2000	N/A	Recycle to preg pond	0.09	7.3	
October 27, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 6, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 7, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 8, 2000	N/A	Recycle to preg pond	0.09	7.3	390
November 9, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 10, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 13, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 14, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 15, 2000	N/A	Recycle to preg pond	0.10	8.6	390
November 16, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 17, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 20, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 21, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 22, 2000	N/A	Recycle to preg pond	0.10	8.6	350
November 23, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 24, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 27, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 28, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 29, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 30, 2000	N/A	Recycle to preg pond	0.09	7.3	300
December 1, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 4, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 5, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 6, 2000	N/A	Recycle to preg pond	0.09	7.3	300
December 7, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 8, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 11, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 12, 2000	N/A	Recycle to preg pond	0.09	7.3	300
December 13, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 14, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 15, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 18, 2000	N/A	Recycle to preg pond	0.08	6.1	
December 19, 2000	N/A	Recycle to preg pond	0.08	6.1	
December 20, 2000	N/A	Recycle to preg pond	0.08	6.1	290
December 21, 2000	N/A	Recycle to preg pond	0.08	6.1	
December 22, 2000	N/A	Recycle to preg pond	0.08	6.1	
December 26, 2000	N/A	Recycle to preg pond	0.07	4.9	
December 27, 2000	N/A	Recycle to preg pond	0.07	4.9	
December 28, 2000	N/A	Recycle to preg pond	0.07	4.9	290
December 29, 2000	N/A	Recycle to preg pond	0.07	4.9	
January 2, 2001	N/A	Recycle to preg pond	0.07	4.9	
January 3, 2001	N/A	Recycle to preg pond	0.07	4.9	
January 4, 2001	N/A	Recycle to preg pond	0.07	4.9	280
January 5, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 8, 2001	N/A	Pump was off	0.06	3.6	
January 9, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 10, 2001	N/A	Recycle to preg pond	0.06	3.6	285

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North Lily Mining Company

EVAPORATION SYSTEM/LEACH FIELD GALLERY

January 11, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 12, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 15, 2001	N/A	Pump was off	0.06	3.6	
January 16, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 17, 2001	N/A	Recycle to preg pond	0.06	3.6	270
January 18, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 19, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 22, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 23, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 24, 2001	N/A	Recycle to preg pond	0.06	3.6	290
January 25, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 26, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 29, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 30, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 31, 2001	N/A	Recycle to preg pond	0.06	3.6	285
February 1, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 2, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 5, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 6, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 7, 2001	N/A	Recycle to preg pond	0.06	3.6	285
February 8, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 9, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 12, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 13, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 14, 2001	N/A	Recycle to preg pond	0.06	3.6	320
February 15, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 16, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 17, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 19, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 20, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 21, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 22, 2001	N/A	Recycle to preg pond	0.06	3.6	310
February 23, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 26, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 27, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 28, 2001	N/A	Recycle to preg pond	0.06	3.6	290
March 1, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 2, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 5, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 6, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 7, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 8, 2001	N/A	Recycle to preg pond	0.06	3.6	280
March 9, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 12, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 13, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 14, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 15, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 16, 2001	N/A	Recycle to preg pond	0.06	3.6	280

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North Lily Mining Company

EVAPORATION SYSTEM/LEACH FIELD GALLERY

March 19, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 20, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 21, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 22, 2001	N/A	Recycle to preg pond	0.06	3.6	280
March 23, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 26, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 27, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 28, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 29, 2001	N/A	Recycle to preg pond	0.06	3.6	290
March 30, 2001	N/A	Recycle to preg pond	0.06	3.6	
April 2, 2001	N/A	Recycle to preg pond	0.06	3.6	
April 3, 2001	N/A	Recycle to preg pond	0.06	3.6	
April 4, 2001	N/A	Recycle to preg pond	0.06	3.6	
April 5, 2001	N/A	Recycle to preg pond	0.06	3.6	270
April 6, 2001	N/A	Recycle to preg pond	0.06	3.6	
May, 2001 Week 1	N/A	Drain Field	N/A	3.6	N/A
May, 2001 Week 2	N/A	Drain Field	N/A	3.6	N/A
May, 2001 Week 3	N/A	Drain Field	N/A	3.6	N/A
May, 2001 Week 4	N/A	Drain Field	N/A	3.6	N/A
June 6, 2001	N/A	Drain Field	N/A	3.6	N/A
June 13, 2001	N/A	Drain Field	N/A	3.6	N/A
June 20, 2001	N/A	Drain Field	N/A	3.6	N/A
June 27, 2001	N/A	Drain Field	N/A	3.6	N/A
July 3, 2001	N/A	Drain Field	N/A	3.6	N/A
July 11, 2001	N/A	Drain Field	N/A	3.6	N/A
July 18, 2001	N/A	Drain Field	N/A	3.6	N/A
July 23, 2001	N/A	Drain Field	N/A	3.6	N/A
August 1, 2001	N/A	Drain Field	N/A	3.0	N/A
August 8, 2001	N/A	Drain Field	N/A	3.0	N/A
August 15, 2001	N/A	Drain Field	N/A	3.0	N/A
August 21, 2001	N/A	Drain Field	N/A	3.0	N/A
August 29, 2001	N/A	Drain Field	N/A	3.0	N/A
October 17, 2001	N/A	Drain Field	N/A	3.0	N/A
October 24, 2001	N/A	Drain Field	N/A	2.8	N/A
November 1, 2001	N/A	Drain Field	N/A	2.8	N/A
November 7, 2001	N/A	Drain Field	N/A	2.8	N/A
November 12, 2001	N/A	Drain Field	N/A	2.5	N/A
November 20, 2001	N/A	Drain Field	N/A	2.5	N/A
December 1, 2001	N/A	Drain Field	N/A	2.2	N/A
December 6, 2001	N/A	Drain Field	N/A	2.2	N/A
December 15, 2001	N/A	Drain Field	N/A	2.2	N/A
December 22, 2001	N/A	Drain Field	N/A	2.4	N/A
December 29, 2001	N/A	Drain Field	N/A	2.6	N/A
January 2, 2002	N/A	Drain Field	N/A	2.8	N/A
January 9, 2002	N/A	Drain Field	N/A	2.8	N/A

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2/1/02

This page is a reference page used to track documents internally for the Division of Oil, Gas and Mining

Mine Permit Number M0230007 Mine Name Tintic Project
Operator North Lily Date March 6, 2002
TO _____ FROM _____

__CONFIDENTIAL __BOND CLOSURE __LARGE MAPS X EXPANDABLE
__MULTIPUL DOCUMENT TRACKING SHEET __NEW APPROVED NOI
__AMENDMENT _OTHER _____

Description YEAR-Record Number

__NOI X Incoming __Outgoing __Internal __Superceded

Closure Report

___NOI __Incoming __Outgoing __Internal __Superceded

__NOI __Incoming __Outgoing __Internal __Superceded

__NOI __Incoming __Outgoing __Internal __Superceded

__TEXT/ 81/2 X 11 MAP PAGES __11 X 17 MAPS __LARGE MAP

COMMENTS: _____

CC: _____